ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2014

WEDNESDAY, APRIL 24, 2013

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:32 p.m., in room SD–192, Dirksen Senate Office Building, Hon. Dianne Feinstein (chairman) presiding.

Present: Senators Feinstein, Udall, Alexander, and Graham.

DEPARTMENT OF ENERGY

NATIONAL NUCLEAR SECURITY ADMINISTRATION

STATEMENT OF NEILE L. MILLER, ACTING UNDER SECRETARY, NUCLEAR SECURITY, AND ACTING ADMINISTRATOR

ACCOMPANIED BY:

DR. DONALD L. COOK, DEPUTY ADMINISTRATOR, DEFENSE PROGRAMS

ADMIRAL JOHN M. RICHARDSON, DEPUTY ADMINISTRATOR, OFFICE OF NAVAL REACTORS

ANNE HARRINGTON, DEPUTY ADMINISTRATOR, DEFENSE NUCLEAR NONPROLIFERATION

OPENING STATEMENT OF SENATOR DIANNE FEINSTEIN

Senator FEINSTEIN. Good afternoon, everyone, and welcome to the Energy and Water Subcommittee's hearing on the National Nuclear Security Administration's (NNSA) fiscal year 2014 budget request. NNSA has requested $11.653 billion for fiscal year 2014. That's an increase of $186 million, or 1.6 percent, from fiscal year 2013. Factoring in sequestration, NNSA would see an increase of about $1.035 billion, or 10 percent. If the budget request were enacted, NNSA would see an increase of $1.8 billion, or 17 percent, in just 4 years.

If the budget request was enacted, NNSA would make up 41 percent of the energy part of our bill in fiscal year 2014, compared to 36 percent in the year 2010. The biggest increase to NNSA's budget is for nuclear weapons activities, and it's taken from nonproliferation. That's the huge tradeoff here. The budget request shows an increase of $311 million, or 4 percent. However, when you factor in a shift of funding for nuclear counterterrorism missions out of nuclear weapons into the nonproliferation account, the nuclear weapons budget sees an actual increase of $567 million, or 7 percent.

The fiscal year 2014 funding level would be the same as what the United States spent in 1985, based on 2013 dollars, when the United States had 25,000 nuclear weapons, was conducting underground nuclear tests, and was designing new weapons. None of that is true today.

Despite these significant increases, I am very concerned that the scope of work proposed in the budget is unsustainable and unrealistic. Given sequestration, shrinking budgets, and NNSA's long history of cost overruns and schedule delays, I don't see how it can successfully execute its mission.

For example, the budget shows five out of seven weapons systems, or 70 percent of its stockpile, would be undergoing a life extension program or major repair. Each one of these life extension programs costs billions of dollars. In the case of the B61 life extension program, it may be as much as $10 billion. Work on life extension programs may crowd out all other investments needed to access the safety, security, and reliability of the current stockpile and address aging infrastructure.

In addition, I am concerned that NNSA did not properly assess cheaper alternatives that can meet national security requirements. For example, NNSA dismissed a much cheaper option priced at $1.5 billion to refurbish the B61 that would have replaced the major components reaching the end of their lives. That program, instead of $1.5 billion, is now $10 billion. I don't understand why the lower-cost option cannot be done.

I also have serious doubts about NNSA's ability to properly manage projects and provide necessary oversight of the contractors operating at national labs and sites. The vice chairman and I have been, I think, very active in this area after seeing a number of cost overruns. We have asked that one person be responsible for each project and that that person come and consult with us on a regular basis so that we don't go through a year and then find out that initial cost estimates are so far off the mark and the project has had problems and those problems have not been addressed in a timely way.

Let me just give a few examples, because this has caused us to have really serious doubts about NNSA's ability to manage projects and provide necessary oversight of the contractors operating the national labs and sites: A $41 million, or 20 percent, cost overrun on a security project at Los Alamos National Lab, because of inadequate management of subcontractors, that's the Nuclear Materials Safeguards and Security Upgrades Project (NMSSUP), which as I understand it, was simply a new fence around some plutonium activities.

An additional $500 million spent at the Uranium Processing Facility (UPF) to raise the roof 13 feet because of design problems. According to the Government Accountability Office (GAO), the Uranium Processing Facility contractor did not adequately manage the design work of subcontractors. NNSA also did not have the skills or expertise to evaluate the work.

The Department of Energy (DOE) Inspector General (IG) found that the Federal oversight of security at the Y–12 site was inadequate and site office staff failed to recognize security-related problems that eventually allowed, as we all know, three protesters to

cut through four security fences to gain access to a supposedly impregnable facility storing highly enriched uranium.

Now, the vice chairman and I did a hearing on this. I think we're intimately familiar with it. We know that changes have been made, and we're appreciative for those changes.

NNSA must do more to overcome these management and oversight deficiencies to restore confidence that it can deliver projects on time and on budget and can safeguard taxpayer dollars.

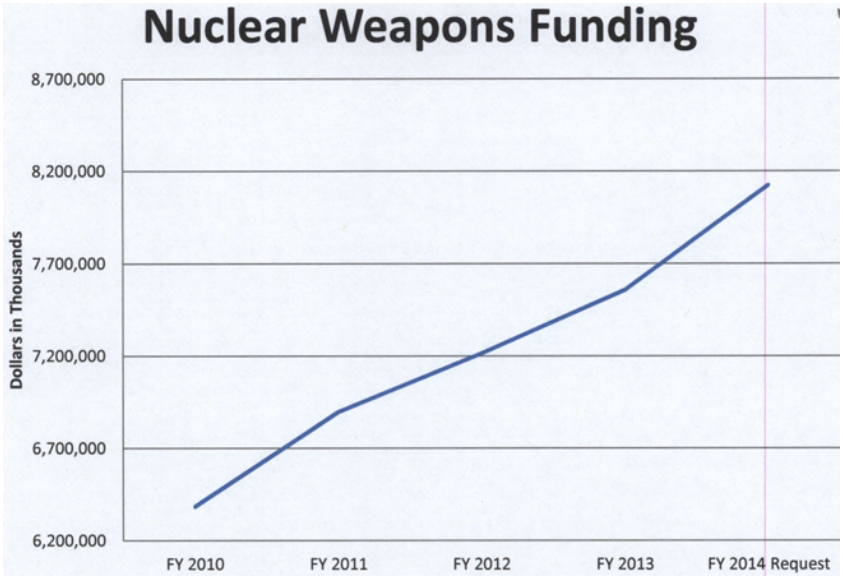
Let me speak for a moment about nonproliferation. My biggest concern with the NNSA budget is the unwarranted and drastic cut to the nonproliferation budget. The core nonproliferation budget would be $1.884 billion, which is a cut of 18 percent, or $417 million, from fiscal year 2013 levels. This drastic budget cut undermines the hard work the nonproliferation office has been doing, and it doesn't reflect the prevention of nuclear terrorism as the highest national security priority.

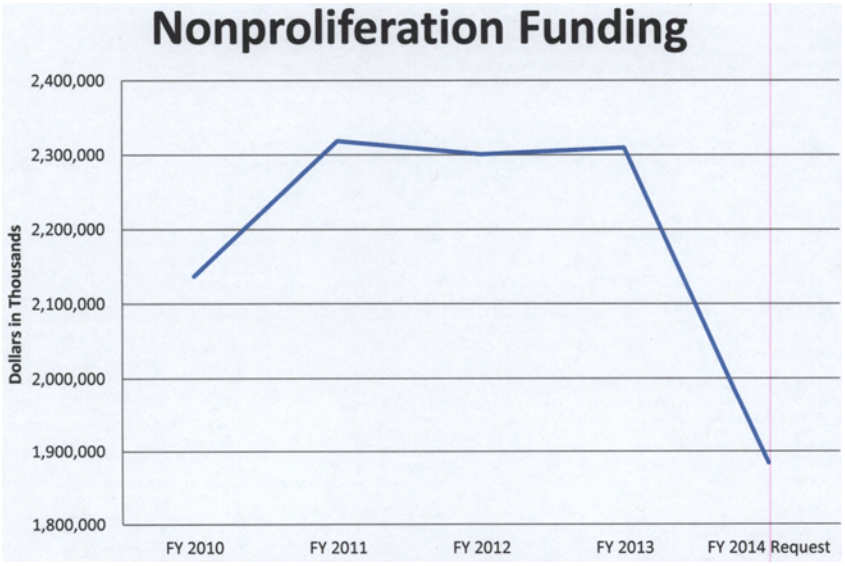
I think some very good things have been accomplished in nonproliferation, not the least of which is the removal of 35 kilograms of highly enriched uranium in 23 countries; the conversion of shutdown of 88 reactors, small, medical, and other civilian-used reactors to prevent them from being misused; security upgrades on 221 buildings in Russia under the Cooperative Threat Reduction program. These are all sites that store warheads: 450 locations with radiation detectors and material being prevented from moving from Russia to Georgia, as well as 10,000 radiological sources that have been secured.

I happen to think this is important work, and it's sure being shortchanged here. This drastic budget cut undermines this hard work. And it doesn't reflect the prevention of nuclear terrorism as our highest priority. I voiced my concern last year that modernizing the nuclear weapons stockpile should not come at the expense of nonproliferation activities. But this budget does just that.

These two graphs show that the nonproliferation program has become the pear for the nuclear weapons program. As you see from the top graph, from 2010, which is $6.2 million, weapons activities are now up close to $8 million, and the nonproliferation funding in just 1 year, from 2013 to 2014, has dropped way down with this $417 million cut in 1 year.

[The graphics follows:]





This cut is surprising, in spite of the fact of securing these nuclear weapons over 4 years. Since the 2009 Prague speech, when the President announced the 4-year goal, 10 more countries are free of all highly enriched uranium, for a total of 23 countries.

Now, so much more needs to be done. More than 1,000 kilograms of highly enriched uranium are sitting in a handful of countries. Large quantities of plutonium are still at risk. Over 100 reactors still need to be converted to low-enriched uranium. Further, thousands of unused radiological sources here at home are insecure and

can be used for dirty bombs. There are still international borders vulnerable to nuclear and radiological smuggling.

So I would ask that you provide an explanation today on the budget tradeoffs that you have made. Joining us here are Neile Miller, the acting Administrator of the National Nuclear Security Administration—I don't envy you; Dr. Donald Cook, the Deputy Administrator for Defense Programs; Ms. Anne Harrington, the Deputy Administrator for Defense Nuclear Nonproliferation; Admiral John Richardson, Deputy Administrator for the Office of Naval Reactors.

I thank you for taking your time to be here, and I'd like to turn to the distinguished vice chairman, Senator Alexander.

STATEMENT OF SENATOR LAMAR ALEXANDER

Senator ALEXANDER. Thanks, Madam Chairman. And it's, as usual, a delight to work with the chairman. We work well together, see eye-to-eye on many things. And when we don't, we work those things out.

We welcome our witnesses. I think the chairman has summarized very well the range of activities in the budget. And I'll save most of my remarks for questions.

I would underscore one thing. And if there were only one thing in my opening statement, it would be this: If the NNSA does not find a more effective way to deal with design of these large multi-billion-dollar facilities that NNSA builds, it's going to lose congressional support for those facilities. I mean, we're dealing with—whether it's plutonium enrichment or uranium processing or other facilities—we're dealing with billions and billions of dollars at a time when the Government is in debt. And every dollar especially counts. It always counts, but it especially does now.

Senator Feinstein was just talking about her concern about the reductions in nuclear proliferation. If we do a better, more effective job in building the uranium facility or in our plutonium supply, that might create money that's available for that purpose. So that's my main concern.

And that is why she and I have started doing a very simple thing with the uranium facility at Oak Ridge, which is having regular meetings with someone who's in charge of it so that we can monitor the progress of a large construction project as it's being designed, so that if we are part of the problem in terms of an efficient and effective management of the project, that we can try to correct it and so that we can make sure that we have at least a good, solid 90-percent design estimate before we start.

In other words, we don't start building the house and then have to tear the roof off because we hadn't properly designed it, which was the case exactly in the uranium facility, costing hundreds of millions of dollars. So that's a waste of money. And we have to do a better job of that. So that's my overwhelming message today to NNSA.

I will be interested to hear what the Department's strategy for plutonium supplies will be since we've deferred moving ahead with that project. So if we're using reused pits, then exactly how many—exactly what are we able to do?

I want to renew my commitment to work with Senator Feinstein on monitoring the uranium processing facility construction design and then its building. I'd like to hear more about exascale computing, the ability of our country to deal with big supplies of data. Every part of our country's research and technology system depends upon that. And I know the Office of Science has much of that budget, but there's a zero for that big-scale computing in this budget. I'd like to understand that.

Then I already have heard why the nuclear navy needs an increase this year, but we'll be looking forward to that testimony, too. So I look forward to the hearing, and I look forward to working with NNSA to get a handle on these big-scale construction projects so that we don't waste taxpayers' dollars. Thank you, Madam Chairman.

Senator FEINSTEIN. I thank you very much and very much appreciate working with you, Senator Alexander. I think we've done some good things. In a way, right now is the real point of decision. We have all these projects that are estimated at one amount, and they just grow like Topsy. I think, ladies and gentlemen, we have to get to the bottom of it and we have to stop it. And we've got to figure a way to do these things with good management.

But in any event, we want to hear from you. So, Ms. Miller, why don't you begin? Welcome to the gristmill.

SUMMARY STATEMENT OF NEILE L. MILLER

Ms. MILLER. Thank you, I think.

Chairman Feinstein, Ranking Member Alexander, distinguished members of the subcommittee, thank you very much for having me here to discuss the President's fiscal year 2014 budget request for the Department of Energy's National Nuclear Security Administration. Your ongoing support of the men and women of the NNSA and the work they do and your bipartisan leadership on some of the most challenging national security issues of our time have helped keep the American people safe, helped protect our allies, and enhanced global security.

The President's $11.7 billion fiscal year 2014 budget for NNSA allows us to continue to implement his national security agenda. As you know, we are also deeply engaged in efforts to realize President Obama's vision for a world without nuclear weapons, free from the threat of nuclear terrorism, and united in our approach toward shared nuclear security goals.

Most recently, in his 2013 State of the Union Address, the President continued to highlight the importance of his nuclear strategy and pledged to ". . . engage Russia to seek further reductions in our nuclear arsenals and continue leading the global effort to secure nuclear materials that could fall into the wrong hands, because our ability to influence others depends on our willingness to lead and meet our obligations."

His budget for fiscal year 2014 reaffirms the President's strong support for our nuclear security missions and provides us with the resources we need to further this work.

I want to assure you that NNSA is being thoughtful, pragmatic, and efficient in how we achieve the Nation's nuclear security objectives and shape the future of nuclear security. As someone with

many years of Federal Government experience at the nexus of programs and budget, I can tell you that while we are challenged to be successful in a time of fiscal austerity and budget uncertainty, we are also dedicating ourselves to driving efficiencies into our programs so that we can make the best use of the taxpayer dollars with which we are entrusted.

Above all, we are challenging ourselves to reject ways of doing business that are holding us back from this, but which have survived long into the post-cold war era simply because they are the way we've always done it. The need to strategically modernize our facilities, infrastructure, and weapons systems is urgent. But so is the need to modernize how we do what we do.

We must, and we are, evaluating our programs and challenging the assumptions for all of our programs and projects to rethink their underlying premises and ensure that we are charting a path to the future that is well-reasoned, responsible, and reflects the best way of doing business today.

I want to assure you that NNSA is being thoughtful, pragmatic, and efficient in how we achieve the Nation's nuclear security objectives and shape the future of nuclear security.

As the President has committed, the NNSA is working to make sure that we have the infrastructure, weapons systems, and the supporting science to certify the Nation's nuclear weapons stockpile through strategic modernization investments. We are working to implement the most ambitious nuclear nonproliferation agenda in the world. Whether or not we were facing this moment's budget uncertainties and fiscal constraints, we have a responsibility to prioritize what we do and to do it in a way that makes sense not only to us, but to you, to our partners at the Department of Defense (DOD), our international partners, and above all to the American taxpayer.

To that end, we are working very hard to guarantee our ability to deliver the mission, something my colleagues throughout the nuclear security enterprise and consistently over the past 60-plus years have always done for this Nation. If we all want to see the nuclear security agenda move forward, and it's my responsibility to ensure that it does, then we need to make certain we are able to maintain essential enabling capabilities, including for plutonium and uranium, infrastructure to support the nuclear Navy, and strong national laboratories that are the backbone of the nuclear security enterprise. And we must continue to chart the path of nuclear security together.

I have personally witnessed the evolution of these programs for many years from my positions both within the NNSA as well as from other perspectives within the U.S. Government. The enduring partnerships between NNSA and DOD, between Congress and the administration, and between our own sites and headquarters is vital to getting the mission accomplished and maintaining the security of the Nation. NNSA cannot survive without it, and the United States nuclear deterrent will deteriorate without it.

NNSA, dating back decades to the Manhattan Project, has operated as a confederation of independent sites and missions, all somewhat coordinated on a path toward a clear goal. I have often said that nuclear weapons are not part of a growth industry. We have

to be smarter, more unified, and more diverse both within NNSA, but also more broadly within the larger deterrence and nuclear security community.

Regardless of our organizational chart or where NNSA is organizationally aligned within the U.S. Government, we can't do anything without the right people in the right places. We are continuously seeking new solutions to improve the way we conduct business. We have reinforced our project management organization and performance through the hiring of Bob Raines, who with 25 years of experience at DOD's Naval Facilities organization, has brought a new clarity and accountability to the way we approach acquisition and project management across NNSA.

We have aggressively sought physical security program improvements through the hiring, first and foremost, of Steve Asher to act as our new Chief of Defense Nuclear Security. Steve is a retired Air Force colonel with 33 years of on-the-ground nuclear security experience with the United States Air Force.

But perhaps most significantly, we have realigned the Federal oversight of roles, responsibilities, and reporting of all of our sites and unified them in partnership under one person, my deputy, Michael Lempke. We are ensuring that we have the right people using the right processes in the right ways across NNSA. Mission and mission support teams are equal, supporting each other's needs on everything from regulatory issues to contracting. You saw it with our future-sharing nuclear production office, which covers Pantex and Y–12 without regard to geography. You can see it in our strong, unprecedented response to security lapses. And you can see it in our plutonium strategy, where creative thinking across our enterprise has given us a path forward in a time of tight budgets.

PREPARED STATEMENT

We're doing the work the American people need us to do, and the President's forthcoming budget will allow us to continue doing that work. We at NNSA have worked hard to align ourselves for the future, and your continuing support has been a vital part of that. I again thank you for having me here today, and I look forward to answering your questions.

[The statement follows:]

PREPARED STATEMENT OF NEILE L. MILLER

INTRODUCTION

Chairman Feinstein, Ranking Member Alexander, and distinguished members of the subcommittee, thank you for having me here to discuss the President's fiscal year 2014 budget request for the Department of Energy's National Nuclear Security Administration (NNSA). Your ongoing support for the men and women of NNSA and the work they do, and your bipartisan leadership on some of the most challenging national security issues of our time, has helped keep the American people safe, helped protect our allies, and enhanced global security.

The NNSA supports the President's nuclear security strategy, including those identified in the President's new global military strategy released in January 2012, the New Strategic Arms Reduction Treaty (New START) signed in 2010, and the Nuclear Posture Review (NPR). In April 2009 in Prague, President Obama shared his vision for a world without nuclear weapons, free from the threat of nuclear terrorism, and united in our approach toward shared nuclear security goals.

Most recently, in his 2013 State of the Union Address, the President continued to highlight the importance of his nuclear strategy and pledged to "engage Russia to seek further reductions in our nuclear arsenals, and continue leading the global

effort to secure nuclear materials that could fall into the wrong hands—because our ability to influence others depends on our willingness to lead and meet our obligations."

The President's fiscal year 2014 request for NNSA is $11.65 billion, an increase of $186 million, or 1.6 percent, over the fiscal year 2013 continuing resolution level and $650 million, or 5.9 percent, over the fiscal year 2012 appropriation at a time of sequestration and spending reductions across the government. The request reaffirms the commitment of the President to his nuclear security vision, applying world-class science that addresses our Nation's greatest nuclear security challenges and building NNSA's 21st century nuclear security enterprise through key investments in our people, programs, and infrastructure.

I want to assure you that NNSA is being thoughtful, pragmatic, and efficient in how we achieve the Nation's nuclear security objectives and shape the future of nuclear security. We are looking forward to what NNSA will become 5, 10, 20 years into the future and what we are doing now to get there.

Our missions are clear: To enhance global security through nuclear deterrence, to reduce global danger from nuclear weapons, nonproliferation, naval nuclear propulsion, and national leadership in science, technology, and engineering. Based on these critical mission and capabilities, the demand on the enterprise is growing. We are challenging ourselves to reject old ideas that represent the way things have been done in the past. We are moving beyond the cold war, strategically modernizing facilities and weapons systems, ensuring that the United States has the critical capabilities it needs without wasteful spending. Given our budget constraints and ongoing uncertainty, we have a responsibility to prioritize how we get things done, and we have developed clear strategies to guarantee our ability to do so. We must evaluate our programs and challenge the assumptions for all of our programs and projects to rethink the underlying premise and ensure that we are charting a path to the future that is well-reasoned and responsible. We are at a particular point in time, unique for a lot of reasons, and the context matters. It was with this in mind that we made sure this year's Budget request was also the result of an unprecedented level of planning and cooperation between the NNSA and the Department of Defense (DOD).

The NNSA has also made a number of organizational changes to help us make better, smarter, and more efficient decisions on how we conduct our operations and identify the resources needed to meet our nuclear strategy.

One of the major actions NNSA took in fiscal year 2013 was standing up the Office of Infrastructure and Operations (NA–00) to serve as the fulcrum of the NNSA. The office encompasses our field operations, which are now directly reporting to the Administrator through the Associate Administrator for Infrastructure and Operations, who is dual-hatted as the NNSA Associate Principal Deputy Administrator. The consolidated office serves to oversee and direct the NNSA's Operations and Infrastructure, which as you know spans eight sites—from nuclear weapons laboratories to production plants—across seven States. The new office will make management of the nuclear security enterprise more efficient and effective.

In addition, the recently established Office of Acquisition and Project Management (NA–APM) continues to integrate our acquisition and project management staffs in order to improve the way we manage and execute major construction projects once the design is sufficiently mature to baseline and begin construction, post phase Critical Decision–2 (CD–2). NA–APM combines its knowledge of contracting and project management to ensure identified and agreed upon needs of the NNSA are met in an effective and efficient manner. Federal Project Directors (FPD) responsible for project delivery have been re-assigned to NA–APM, and we are establishing Project Management Offices staffed with people possessing appropriate construction project management skills that will report directly to the FPDs. Lastly, the NNSA is better aligning contract incentives for Capital Asset Projects to structure contracts to provide an equitable balance of risks; ensuring each party bears responsibility for its own actions, rewarding contractors for generating savings while protecting the taxpayers from paying for contractor negligence. We expect these changes to fundamentally affect the way the NNSA reviews its projects and interacts with its contractors to continue to drive efficiencies while delivering on our mission under current fiscal constraints.

In the last year, NA–APM's efforts resulted in $20 million in reimbursements from contractors as we moved to more fully utilize our contracts to hold them accountable for unsatisfactory performance. We issued an unambiguous design policy for our complex nuclear projects ensuring that sufficient design work (90 percent) is completed prior to approving project baselines at CD–2. Of nonmajor projects completed since 2007 with the construction budget baseline established in 2006 or later, 83 percent (10 out of 12) were delivered on time and at or under budget.

These 12 nonmajor projects with a combined budget of $311 million were delivered more than $32 million under budget. We are confident that the lessons learned in delivering this work are applicable and scalable to the major systems projects we have had problems with in the past.

A third management change is to put more focus on cost planning relative to budgeting and execution, particularly in today's fiscal climate. Key decisions about priorities and resource allocations must be made centrally within the NNSA, rather than left solely to individual sites. The NNSA Act is clear that planning, programming, budgeting and financial activities comport with sound financial and fiscal management principles. Over a year ago, the NNSA embarked on a multiyear, iterative process with the Department of Defense's Office of Cost Assessment and Program Evaluation (CAPE) to conduct a rigorous analysis to try to determine how to best meet the President's nuclear strategy and the resources it will take to both accomplish the current program of work as well as to recapitalize our infrastructure. This ongoing effort will continue to inform our planning and programming decisions and will be the foundation upon which we build successive outyear budgets.

In order to further improve transparency with Congress and to further drive efficiencies into our program planning and execution, the NNSA's fiscal year 2014 budget request makes some significant changes to our budget structure.

In the fiscal year 2014 budget, the Infrastructure and Operations (NA–00) organization gains budget authority which will move the NNSA towards a tenant-landlord site model in which NA–00 is the landlord and the program offices are now tenants. As a result of this reorganization, the NNSA is proposing to eliminate the Readiness in Technical Base and Facilities (RTBF) GPRA unit in our budget and split these activities between the existing Site Stewardship unit and "Nuclear Programs" within Defense Programs. The activities managed by NA–00 would be added to Site Stewardship under a new subprogram titled "Enterprise Infrastructure" which would encompass Site Operations, Site Support, Sustainment, Facilities Disposition, and site infrastructure-related construction. Nuclear Programs will provide for capability investments and capital construction projects that uniquely support the mission of Defense Programs.

The Defense Nuclear Nonproliferation appropriation account of the fiscal year 2014 budget request has been restructured to include the Nuclear Counter Terrorism Incident Response (NCTIR/NA–40) and Counterterrorism and Counterproliferation Programs (CTCP/NA–80) programs, both of which include activities transferred out of the Weapons Activities appropriation. By drawing together these NNSA programs in the Defense Nuclear Nonproliferation appropriation, we strengthen existing synergies and cooperation among these functions. In doing so, we provide priority and emphasis to the NNSA programs that are responsible for implementing the President's nuclear security priorities for reducing global nuclear dangers and the 2010 Nuclear Posture Review (NPR) which "outlines the Administration's approach to promoting the President's agenda for reducing nuclear dangers and pursuing the goal of a world without nuclear weapons, while simultaneously advancing broader U.S. security interests." This change in budget structure will present with greater clarity the total funding and level of activity undertaken by the NNSA in this area, which the NPR identifies as the highest priority nuclear threat facing the Nation. At the same time, this realignment ensures that the Weapons Activities appropriation is now more focused on stockpile and related activities, such as physical and cyber security.

WEAPONS ACTIVITIES

Defense Programs Overview

After adjusting for the infrastructure-related budget realignments described previously, the fiscal year 2014 Defense Programs portion of the Weapons Activities account is $5.1 billion or $410.2 million above the fiscal year 2013 continuing resolution level, constituting a 9 percent increase. As the President has committed, the NNSA is strategically modernizing our nuclear weapons infrastructure, weapons systems, and the supporting science to ensure a safe, secure and effective deterrent and to certify the stockpile without underground nuclear testing. Within today's constrained fiscal environment, we have closely scrutinized our strategies, plans, processes, and organization to ensure we make the most of our resources. The results of the NNSA and DOD budget-driven requirements analysis has forged a stronger link between DOD's requirements and the NNSA's resulting resource needs across the nuclear security enterprise. Some highlights include a new strategy for the conduct of Life Extension Programs (LEPs); an updated and more complete plutonium strategy; a refocusing of our science and infrastructure investments on the capabilities most urgently needed; a reorganization of the operations of facilities accounts

and major infrastructure project responsibilities within NNSA's Defense Programs; and a significant effort to identify and implement management efficiencies. Each of these critical areas was determined following enormous effort to make smart business decisions on resourcing the highest priority mission work.

Life Extension Programs Strategy and Execution

The DOD's "3 + 2" strategy calls for the transition of four warheads that make up the ballistic missile portion of our stockpile to be transitioned, over the next 25 years, to three life-extended, interoperable warheads that DOD could flexibly deploy across different missile platforms. Further, we will transition the three bomb/cruise missile warheads in the stockpile to two warhead types as part of their life extension.

In January 2013, the Nuclear Weapons Council (NWC) changed the schedule and cumulative production quantity for the W76–1 program. This change reduced the total LEP production quantity and realigned the end of the production period for all operational units from fiscal year 2021 to fiscal year 2019. Specifically, the scope and schedule parameters for the program in fiscal year 2013 and fiscal year 2014 remain unchanged as the program will be executing steady-state rate production, and the annual production rates are the same for both fiscal years.

Regarding the B61 LEP, the NWC selected the option (3B) which satisfies the minimum Department of Defense threshold requirements at reduced life cycle costs. Option 3B maximizes the reuse of nuclear and non-nuclear components while still meeting military requirements for service life extension and consolidation of multiple versions of the B61 into the B61–12.

Following the W76 and B61 LEPs, the first of the LEPs to which the 3 + 2 strategy applies is the W78/88–1. A joint DOD/NNSA Enterprise Planning Working Group developed schedules reflected in the forthcoming fiscal year 2014 Stockpile Stewardship and Management Plan (SSMP) which considers alignment of warhead development and production schedules with DOD system platform upgrades and balancing the workload across the nuclear security enterprise. Once developed as part of the Phase 6.2A activities, the DOD Cost Assessment and Program Evaluation (CAPE) team will review and the NWC will approve cost estimates for the W78/88 and future LEPs.

Engineering development for an alteration to the W88, the W88 Alt 370, is also under way. This Alt will address certain lifetime requirements by modernizing the Arming, Fuzing & Firing system and improving surety by incorporating a lightning arrestor connector. It will also provide additional logistical spares for the life of the system. The NNSA will complete the W88 Alt 370, the neutron generator replacement, and gas reservoir replacement will be completed at the same time with a planned first production unit for December 2018.

Plutonium Strategy

NNSA is committed to ensuring continuity of required plutonium support capabilities and mission functions to include analytical chemistry, material characterization, manufacturing, and storage functions. The strategy for doing so is encompassed by the Defense Programs Plutonium Strategy that expands our capability over the next decade to achieve a 30 pits-per-year capability by 2021 to support the W78/88–1 LEP activities. Achievement of this capability requires additional investment in the Plutonium Sustainment program along with efforts to free up space within the PF4 facility at LANL by cleaning out the existing vault space and installing additional equipment in existing facilities.

This strategy is critical for today's stockpile and is independent of the deferral period for the Chemistry and Metallurgy Research Replacement—Nuclear Facility (CMRR–NF). We are on track to move operations out of the existing Chemistry and Metallurgy Research facility at Los Alamos National Laboratory in 2019. Execution requires a $120 million reprogramming approval for fiscal year 2012 funds. This reprogramming is urgent for our workforce. NNSA and CAPE are developing a business case analysis of the plutonium strategy by August 2013. CMRR–NF deferral provides NNSA the opportunity to balance funding and requirements, and to evaluate an integrated, long-term plutonium capability solution.

Research Development Test & Evaluation (RDT&E)

Last year we commemorated the 20th anniversary of the end of underground nuclear weapons testing in the U.S. Shortly after that decision in 1992, the Stockpile Stewardship Program was established to provide the science, tools, and critical skills necessary to certify that the stockpile is safe, secure, and effective without the need for nuclear testing. Since that time, we have been filling our toolbox with the cutting-edge science needed to accomplish this formidable challenge. Maintaining a stockpile under these conditions requires the best science and technology in the

world. Breakthroughs have occurred that have enabled us to achieve this goal for today's stockpile. But as we look into the future, we see the need for the enhanced use of our science tools to gain better assurance that as our stockpile ages it will continue to be safe, secure and effective. The modern tools of Stockpile Stewardship not only serve as our insurance policy against a return to nuclear testing, but they also are increasingly revealing the "first principles" physics and materials' properties of our weapon systems.

Priorities of the Stockpile Stewardship Program include the development of capabilities to design and certify LEP options; preservation of specialized skills needed for maintenance of the nuclear stockpile by a generation of scientists who will not have worked with those experienced in nuclear testing; development of capabilities enabling timely resolution of issues from significant finding investigations resulting from surveillance observations; enabling annual assessment of the stockpile and associated operational decisions; and reducing nuclear dangers through the extension of capabilities used for assessments of foreign state weapons activities.

In the fiscal year 2014 budget request, the Science Campaigns seek funding to provide the science underpinnings of our Plutonium Strategy and reuse options for the future stockpile, as well as advanced certification of nuclear explosive package options with improved surety to support LEP decisions and advanced diagnostics and experimental platforms (particularly optical imaging and radiography) for future subcritical experiments that augment and guide our plutonium science research. Through the National Boost Initiative (NBI), the Science Campaign is improving physics models for primary fission "boost." This understanding is essential as we reduce the stockpile, especially since we will be reusing many nuclear components.

The fiscal year 2014 budget request for the Inertial Confinement Fusion and High Yield Campaign features an increased emphasis on nonignition high energy density (HED) experiments, diagnostics, and experimental platforms development to support reuse and stockpile modernization. Such platforms and diagnostics will help validate secondary performance and surety technologies for the future stockpile, as well as help provide radiation effects testing of non-nuclear components. In addition, the budget request supports progress on achieving ignition, or thermonuclear burn in the laboratory, in accordance with the Path Forward report supplied to Congress in December 2012. This report described our plan for resolving discrepancies between experimental results at the National Ignition Facility (NIF) and the prediction of our codes, as well as the development of alternate ignition approaches (polar drive, direct drive, and magnetic drive). An Independent Advisory Board on ignition will be a subpanel of new Federal Advisory Committee being formed to provide advice on NNSA stockpile stewardship challenges. Finally, the budget seeks support for the continued safe and efficient operation of NNSA's three major High Energy Density facilities: NIF, OMEGA, and the Z machine.

The budget in fiscal year 2014 for our Advanced Simulation and Computing (ASC) program seeks to implement the "3 + 2 Strategy" agreed to by the NWC described earlier. To implement that strategy, an understanding of plutonium reuse and performance, which ASC simulation helps provide, is critical. Further, the ASC budget seeks support for improved and more responsive full system modeling and simulation capabilities for annual assessments, LEPs and significant finding investigations that provide enhanced fidelity in the stockpile. ASC is uniquely challenged by supercomputing technology advances that are forcing an evolution in computer architectures that are inconsistent with current methods used in our national computational tools for stockpile assessment. In response, ASC is coordinating high performance computing technology, research and development with the DOE Office of Science's Advanced Scientific Computing Research (ASCR) office, and attempting to maintain adequate essential skills and capabilities to support current and future requirements under flat budget restrictions. Foreign nuclear weapons assessments will continue to rely on our Nation's nuclear weapons code base.

Strategic Management

Building on the strength of our experience working with DOD this past year, we are enhancing our partnership this year in areas where both of us will benefit. Specifically this year, studies are being conducted with DOD to find efficiencies and to identify workforce priorities. The "3 + 2 strategy" and the aggressive LEP schedule associated with that strategy are being implemented. Modernization of critical mission support infrastructure is focusing on the Uranium Processing Facility (UPF) with acceleration out of Building 9212, and moving forward with the plutonium Strategy.

Our enhanced partnership with DOD will be evident not only this year but also over the FYNSP period (fiscal year 2014–2018), and beyond, throughout the next

25 years as the 3 + 2 Strategy, the LEPs, and modernization are all at various stages of planning and execution. The 25 year Strategic Plan will be described in detail in the forthcoming fiscal year 2014 SSMP.

NNSA is taking the initiative to improve the effectiveness and reduce the cost of its operations and business practices. We understand that every dollar counts in these fiscal times and NNSA will build upon a number of successful efforts in the past to improve our contractors operations and efficiencies. We have already saved considerable money through our supply-chain management initiative, planned consolidation of the Y–12 and Pantex contracts, and pressing our contractors to change their benefit plans for employees, particularly pension plans. The funding requested in fiscal year 2014 reflects anticipated "Workforce Prioritization" and "Management Efficiencies" savings as part of the NNSA/DOD joint study.

Defense Nuclear Security Overview

The NNSA recently reorganized our security organization to establish clear lines of authority for responsibility and institutionalize a formal performance assessment capability. The Office of Defense Nuclear Security's primary missions are policy development, strategic planning, and performance assessments of NNSA site activities. We also realigned security management for operational direction, resource execution authority, and field assistance activities to the Office of Infrastructure and Operations (NA–00) which is consistent with its existing line management authority over all NNSA sites. NNSA is changing our culture of how we assess security so that we do not rely on reports provided by others but instead assess operational readiness of security at the sites by dispatching experts from the Office of the Chief of Defense Nuclear Security.

We are also committed to hiring the right caliber of security professionals; those with operational nuclear security field experience, to reshape and continue to improve the culture of nuclear security at NNSA. This initiative is focusing our leadership on instilling a culture that embraces security as an essential element of the NNSA mission, which is to provide the utmost protection for national security resources.

DNS is also hiring 15 additional Federal security experts in fiscal year 2013 to conduct performance-based assessments at each of the NNSA sites. These security professionals will visit each site, to perform assessments of security readiness by directly observing security operations, and program implementation.

In the period following the Y–12 security event on July 28, 2012, we have learned a lot about our organization, the assumptions we had made, and how we communicate. The incident at Y–12 was a completely unacceptable breach of security. The security of our Nation's nuclear material is our most important responsibility, and we have no tolerance for such unacceptable performance. We have taken strong and decisive action to fix the issues that led to the incident at Y–12.

We immediately shared lessons learned with all the NNSA Field sites and directed each to perform self-assessments related to those concerns found at Y–12. We directed the sites to assess: (1) security culture; (2) formality of operations; (3) rules of engagement procedures; (4) security system maintenance and compensatory measures. We initiated efforts to establish a robust assessment model, which has included the new Acting Chief of Defense Nuclear Security leading teams of security professionals to conduct assessments of all NNSA sites to determine security readiness and review of Field Office and contractor security performance.

We are executing a deliberate process to restore the DOE directives as the baseline safeguards and security policy for NNSA.

Using NNSA's Corporate Performance Evaluation Process, our assessment of the Y–12 management and operating contractor's performance resulted in lost award fee totaling $12.2 million, which included 100 percent of their possible security-related fee and a negative overall management fee adjustment of $10 million.

Cyber Security

The fiscal year 2014 budget reflects the consolidation of the activities managed by the NNSA Office of the Chief Information Officer under NNSA CIO (NCIO) Activities. The consolidation under a single account will allow more effective and integrated management of the program. Cyber Initiatives are supported by IT Investments and this change will provide better alignment of resources to focus on the emerging threat and to deliver capabilities that allow our employees to work anywhere, anytime, on any device. The fiscal year 2014 budget includes $148 million for the NCIO activities which includes support for Federal IT as well as all programmatic funding for cyber security (covering Federal employees and our Managing and Operating Contractors).

Providing an effective enterprise IT/Cyber strategy is critical to enablement of the OneNNSA strategy, the achievement of cost savings, and the deployment of shared services for the nuclear security enterprise. The NCIO leads Federal efforts to deploy innovative IT solutions, research and develop cyber defense technologies, and to deploy effective cyber security tools such as continuous monitoring, data loss prevention, and strengthened access controls. The NCIO focus for the next 5 years is to continue execution of our integrated strategy of IT Transformation (the NNSA Network Vision (2NV)), improved security monitoring of our environment (Joint Cyber Coordination Center (JC3)), and deploying next generation cyber defense capabilities that alter the economics of the cyber battlefield (Cyber Sciences Laboratory (CSL)).

The NCIO made significant progress towards the OneNNSA vision in fiscal year 2013. The organization deployed a new, secure wide-area network (OneNNSA Network), a first of its kind federated Identity Management solution (a critical path step to full HSPD–12 implementation), a unified communications solution and agency wide social network allowing for the collaboration of over 45,000 employees (ONEvoice), and a state of the art cloud services broker (YOURcloud) that will provide a foundation for cloud computing adoption and was recently recognized by Excellence.gov as the most innovative project in government.

Fiscal year 2014 will build on these achievements and progress all three elements of our integrated strategy forward. For 2NV, NCIO will consolidate data centers using YOURcloud, modernize our applications to reduce legacy IT costs and enable a mobile workforce, and consolidate our intranets, Web sites, and file servers to common platforms to reduce costs. NCIO will improve our classified network monitoring capabilities, provide monitoring for 2NV investments, and strengthen the partnership with DOE for unclassified JC3 capabilities. For CSL, NNSA will execute a robust cyber defense R&D portfolio center around 3 signature programs: (1) Mission Resilience and Assurance; (2) Big Data and Behavioral Cyber Analytics; and (3) Scalable Testing of System Cyber Dynamics.

DEFENSE NUCLEAR NONPROLIFERATION

As I mentioned earlier, we decided to align all the global nuclear security activities under the Defense Nuclear Nonproliferation account. This will strengthen our focus on countering nuclear terrorism and proliferation, while encouraging cooperation among our programs in this area. The Request includes $2.1 billion for the DNN appropriation which includes the NNSA Defense Nuclear Nonproliferation (DNN/NA–20), Nuclear Counter Terrorism Incident Response (NCTIR/NA–40), and Counterterrorism/Counterproliferation (CTCP/NA–80) programs.

Office of Defense Nuclear Nonproliferation

As we look to the future, we see challenges and opportunities across the globe. Over the past 4 years we have seen increased focus, determination and expansion of activities with our international partners. This has been due largely to the momentum created by the Nuclear Security Summit process to meet shared nuclear security goals. Russia, for example, has announced its intention to be a full partner with us, and remains a critical partner in the efforts to secure the most vulnerable nuclear materials and keep them out of the hands of proliferators and terrorists. The Russians are not alone, and dozens of countries have stood alongside President Obama and the United States at two Nuclear Security Summits to show their commitment to our shared cause.

One of our most important accomplishments has been to support the Administration's commitment to secure the most vulnerable nuclear material across the globe in 4 years. Since 2009, our efforts to secure plutonium and highly enriched uranium (HEU) around the world have accelerated to make it significantly more difficult to acquire and traffic the materials to make an improvised nuclear device. I am proud to say that we are very close to meeting our goals to remove or dispose of 4,353 kilograms of highly enriched uranium and plutonium in foreign countries by the end of 2013, and equip 229 buildings containing weapons-usable material with state-of-the-art security upgrades, though some challenges remain.

On April 5, 2013, we completed the removal of all HEU from the Czech Republic, making it the 10th country to be completely cleaned out of HEU in the last 4 years. The NNSA will complete prioritized removal of vulnerable nuclear material from three more countries this year.

The 4-year effort allowed us to accelerate some of our most important work, but it has been accurately described as "a sprint in the middle of a marathon." After our 4-year sprint, there will be much left to complete in the areas of the elimination, consolidation and securing of nuclear and radiological materials worldwide. Nuclear and radiological terrorism continues to be a grave threat, nuclear and radiological

WMD technology and expertise remain at risk, and materials of concern, such as plutonium, still are being produced. While the challenges are substantial, they are not insurmountable.

NNSA, working with its international partners and with strong support from the White House, will continue to eliminate, consolidate and secure high risk materials to ensure that terrorists can never acquire a weapon of mass destruction. The fiscal year 2014 request for ODNN provides $1.8 billion to: Continue efforts both domestically and internationally to convert research reactors and isotope production facilities from HEU to LEU, consolidate nuclear material in fewer locations, and permanently eliminate it where possible, improve and sustain safeguards and the security of nuclear materials at those locations, support the adoption of security best practices, prioritize efforts to secure or remove high-risk radiological sources, prevent illicit trafficking of nuclear and radiological material through the provision of fixed and mobile detection equipment and export control training, and work in collaboration with international partners to build global capability in these areas.

We will continue to pursue a multilayered approach to protect and account for material at its source, remove, downblend or eliminate material when possible, detect, deter and reduce the risk of additional states acquiring nuclear weapons, and support the development of new technologies to detect nuclear trafficking and proliferation, as well as verify arms control treaties.

We owe it to the American people to continually reevaluate our work and make strategic decisions for the future. The fiscal year 2014 budget request takes a thoughtful look at the Mixed Oxide (MO_X) Fuel Fabrication Facility project and our plutonium disposition options. The United States remains committed to disposing of excess plutonium, and we believe this review will ensure that we are able to follow-through on our mission in the decades to come. The U.S. plan to dispose of surplus weapons-grade plutonium by irradiating it as MO_X fuel has proven more costly to construct and operate than anticipated. Considering these unanticipated cost increases and the current budget environment, the Administration has begun assessing alternative plutonium disposition strategies and identifying options for fiscal year 2014 and the outyears. During the assessment period, the Department will slow down its MO_X project. We are committed to disposing of excess plutonium, we recognize the importance of the U.S.-Russia Plutonium Management and Disposition Agreement, and the U.S. will continue to engage key program partners and stakeholders as the assessment of alternative plutonium disposition strategies is developed.

Our continued focus on nonproliferation and nuclear security efforts is vital. The threat of nuclear terrorism and WMD proliferation remains. Detonation of a nuclear device anywhere in the world could lead to significant loss of life, and extraordinary economic, political, and psychological consequences. We must remain committed to reducing the risk of nuclear terrorism and WMD proliferation.

Nuclear Counterterrorism Incident Response

This year, the request for NCTIR will support a strategy focused on reducing nuclear dangers through integration of its subprograms; Emergency Management, Emergency Response, Forensics and International activities supported by training and operations.

In fiscal year 2014, the program will invest in leverage at a distance capability for the Nuclear Emergency Support Team, maintain training of the Consequence Management Home Team, sustain stabilization cities, complete improvements to U12P-tunnel, address and sustain emergency management requirements, maintain the Emergency Communications Network, and continue supporting international partners. The NCTIR program will continue to maintain essential components of the Nation's capability to respond to and manage the consequences of nuclear incidents domestically and internationally, and continue to conduct programs to train and equip response organizations on the technical aspects of nuclear counterterrorism.

Counterterrorism and Counterproliferation Programs

The aforementioned budget realignment includes the Counterterrorism and Counterproliferation, or CTCP, program office, which we stood up last year. The funding request for CTCP includes the transfer of the discontinued National Security Applications funding into a consolidated and substantially revised budget line to support the highest priority counterterrorism and counterproliferation technical work, including the study of Improvised Nuclear Devices and other nonstockpile nuclear device threats. This increased funding will support unique nuclear device-related technical contributions derived from NNSA's core nuclear science and technology expertise. This activity supports interagency policy execution, DOD and Intelligence Community customers, and DOE's own emergency response operations.

NAVAL REACTORS

Naval Reactors' (NR) request for fiscal year 2014 is $1.246 billion, an increase of 15 percent over the fiscal year 2012 request, to continue safe and reliable naval nuclear propulsion. The program directly supports all aspects of the U.S. Navy's nuclear fleet, which encompasses the Navy's submarines and aircraft carriers, over 40 percent of the U.S. Navy's major combatants. Currently, the nuclear fleet is comprised of 54 attack submarines, 14 ballistic missile submarines, 4 guided missile submarines, and 10 aircraft carriers. Over 8,300 nuclear-trained Navy sailors safely operate the propulsion plants on these ships all over the world, and their consistent forward presence protects our national interests.

Continued safe and reliable naval nuclear propulsion requires that NR maintain the capability to anticipate and immediately respond to small problems before they become larger issues. Our technical base and laboratory design, test, and analysis infrastructure is required for us to thoroughly and quickly evaluate technical issues that arise from design, manufacture, operations, and maintenance, ensuring crew and public safety without impeding the mission of our nuclear-powered fleet. Uncompromising and timely support for safe operation of the nuclear fleet continues to be the highest priority for Naval Reactors.

Beyond fleet support, Naval Reactors continues efforts on its three important new projects: the design of the *Ohio* Replacement reactor plant; the refueling overhaul for the S8G Land-based Prototype reactor; and recapitalization of our naval spent nuclear fuel infrastructure. Each of the projects is critical to fulfillment of the Navy's longer term needs.

The current *Ohio*-Class ballistic missile submarines are reaching the end of their operational lives and will begin to retire in 2027. Naval Reactors is designing and developing a life-of-ship core for the *Ohio* Replacement that will increase SSBN operational availability and reduce strategic deterrence submarine procurements from 14 to 12. The fiscal year 2014 request is $125.6 million and supports the Navy's schedule and progresses on reactor plant design needed for procurement of reactor plant components beginning in 2019. This request is essential to component design, procurement and ship construction.

The Land-based Prototype provides a cost-effective testing platform for new technologies and components before they are introduced to the fleet, and is essential for the testing of new materials and technology for the *Ohio* Replacement life-of-ship core. To preserve this vital research, development, and training asset for the long-term and to achieve life-of-ship core for the *Ohio* Replacement, core development and preparations for the refueling overhaul must continue in fiscal year 2014. The fiscal year 2014 request for the S8G Land-based Prototype Refueling Overhaul is $143.8 million.

Finally, the Spent Fuel Handling Recapitalization Project (SFHP) supports the Navy's refueling and defueling schedule for nuclear-powered aircraft carriers and submarines by providing the capability to unload and return spent fuel shipping containers to the shipyard. The fiscal year 2014 budget includes $70 million to continue conceptual design for a new facility. Significant portions of the existing Expended Core Facility are more than 50 years old, and were not designed for its current mission of processing and packaging spent naval nuclear fuel for permanent dry storage. The existing facility is not capable of handling full-length aircraft carrier fuel from M–290 shipping/storage containers. The need to prioritize operational fleet support following enactment of the Budget Control Act resulted in a year and a half delay to the project; the fiscal year 2014 request supports this revised schedule. Further delay to the SFHP would create a need for additional M–290 containers, at approximately $100 million per year of delay, for temporary storage.

Like our Weapons program, over the last year, DOE, NNSA, and the DOD CAPE conducted a comprehensive analysis of Naval Reactors' program and validated that our requirements are consistent with the President's overall strategy.

OFFICE OF THE ADMINISTRATOR

The NNSA's Office of the Administrator (OA) appropriation provides the Federal salaries and other expenses of the NNSA mission and mission support staff, including the Federal personnel for Defense Programs, Defense Nuclear Nonproliferation, Emergency Operations, Defense Nuclear Security, Acquisition and Project Management, the Office of the Chief Information Officer, Safety and Health, the Administrator's direct staff, and Federal employees at the Albuquerque Complex and site offices. The OA account is an essential enabler of the Federal roles and missions that are the heart of our Enterprise.

The OA account continues to streamline operations and provide staffing for efficient and effective oversight to our programs. We have taken aggressive measures

to significantly downsize the account, including cutting travel and support services by about one-third and offering voluntary separation incentive payments and early retirement to help right-size our workforce.

IMPACT OF SEQUESTRATION

The sequestration cuts now in effect will hamper NNSA's ability to carry out the full range of national security activities planned in our fiscal year 2013 budget. These cuts are coming 5 months into the current fiscal year, forcing the NNSA to absorb the spending reduction in a 7-month period rather than an entire year. Under the current law, the NNSA fiscal year 2013 budgetary resources have been cut by roughly 7.8 percent, which equates to an effective reduction of over 13 percent when measured over the balance of the fiscal year. Under sequestration, the reduction for the entire NNSA is approximately $900 million. This results in the Weapons Activities appropriation is approximately $600 million below the fiscal year 2013 request levels, and more than $250 million below the fiscal year 2012 levels.

Prior to sequestration taking effect, NNSA informed Congress through hearings on two separate occasions that thousands of contractor jobs at our labs and plants could be affected either through work hour reductions or other personnel actions with Directed Stockpile Work and the Life Extension Programs being impacted the greatest. While we continue to believe that sequestration will cause significant impacts, these preliminary impact statements, which were formulated in a period of uncertainty regarding the precise provisions of the final continuing resolution (CR), need to be revised.

Now that we know the actual terms and conditions of the CR, NNSA is working closely with our partners in the labs and plants to develop mitigation strategies that will protect our highest priority workload to the best of our ability given the current resources. Our highest priority will remain the safety and security of our nuclear security enterprise. Once this review is completed, the Department plans to use a combination of the Operating Plan required by the CR, as well as a reprogramming to address the most critical funding needs and implement mitigation strategies to give program managers the flexibility they need to best handle the reductions across the enterprise.

Due to the indiscriminate nature of these cuts and view that it remains poor policy, the President's fiscal year 2014 budget request does not reflect sequestration's impacts; either in fiscal year 2014 or across the FYNSP.

CONCLUSION

The fiscal year 2014 budget reaffirms the national commitment to the President's nuclear security vision, applying world-class science that addresses our Nation's greatest nuclear security challenges and building NNSA's 21st century nuclear security enterprise through key investments in our people, programs and infrastructure. We are looking toward the future and building an organization that will ensure success. I look forward to working with each of you to help us do that. Thank you.

Senator FEINSTEIN. Thank you very much. I think we have a lot of questions.

I'd like to begin with Dr. Cook, with a question on the B61 life extension program. This is $10 billion to refurbish 400 bombs. As I understand it, the original purpose of the life extension program was to replace three critical components called the triple alt. As a matter of fact, I was briefed on that with a model, and it was a limited scope. It would have met the nuclear posture review goal of refurbishing the first unit by 2017 and would have cost about $1.5 billion.

The current scope is now much more ambitious, replacing hundreds of components, and may cost as much as $10 billion. The date for refurbishing the first unit has now slipped 2 years, to 2019, and with sequestration, it has slipped another 6 months, to March 2020. And the cost has increased another $200 million.

Given current budget conditions, Dr. Cook, cost overruns, schedule delays, competing priorities, do you plan on reassessing the scope for the B61?

Dr. COOK. If I can answer that, we've had a continuous assessment of the scope, ongoing for the past several years. We've worked with the Department of Defense. We've worked with the U.S. Strategic Command, certainly the Air Force, in sorting out what you've mentioned, Chairman. The triple alt, or triple alteration, was considered in the analysis. It was considered in the judgment. And the conclusion made by the Air Force, supported by NNSA and U.S. Strategic Command, was that if we took the path to replace the B61 radar system and also the neutron generator—the neutron generator includes tritium; the radar system is the last unit still to have vacuum tubes. This is America's oldest system in the stockpile and the third element to improve the power supply, which is also degrading—if we did that, we'd delay the need for a life extension program by about 10 years, but we would then need a life extension program that would be more expensive. It would have to be done under more extreme urgency. And so we instead have managed the scope. We've reduced the scope. We have the B61 as the lowest-cost life extension program that meets the military needs.

If you have follow-up questions, I'd be happy to answer more.

Senator FEINSTEIN. Well, the problem is here we go from $1.5 billion to $10 billion. And that's just for starters. I appreciate the answer, but as we look at virtually every program here, they all run above budget and they all have problems. It's a very sobering thought to me, because I'm of the school that doesn't believe that we need all these nuclear weapons.

Let me ask another question. According to budget documents, Ms. Miller, it's my understanding that you plan to spend $2.6 billion over the next 4 years for pay increases for contractors at weapons labs. My understanding is that you plan to increase contractors' pay from the current 2.3 percent a year to 4 percent a year.

Now, here's the rub. We've had all Federal salaries frozen for 3 years now. The compensation, it seems to me, at the national lab is more than adequate. So why do contractors need a 4-percent increase a year totaling $2.6 billion?

Ms. MILLER. Thank you, Senator. The decision on what to allow for pay for contractors at Department of Energy national laboratories is a decision made by the Department of Energy, in this case, the Secretary himself. And it's not a separate NNSA decision. So there was a decision, I know, over the past year, and I will get you the details. I don't have them off the top of my head. I recall when it happened that there would be some increase allowed.

[The information follows:]

CONTRACTOR PAY INCREASE

Contractors are not receiving a 4-percent pay increase per year.

The Secretary of Energy implemented a 2-year salary freeze in fiscal year 2011 and fiscal year 2012 for Management and Operating (M&O) and major site and facility management contractor employees, other than those covered by collective bargaining agreements. During the 2-year salary freeze, the Secretary authorized a total salary increase fund of up to 2 percent, to achieve parity with the salary adjustments received by Federal employees.

More broadly, NNSA Integrated Contractors (ICs) have had an authorized salary growth of about 2 percent since 2010, about the rate of Federal employees while under a Federal salary "freeze." For active contractor employees, the weighted average growth rate across all sites was: 2.6 percent in fiscal year 2010; 2 percent in fiscal year 2011; and 2 percent in fiscal year 2012. This salary growth rate is about

equal to Federal employees, where according to OPM data, average salaries increased by 2 percent from fiscal year 2009—fiscal year 2012 when there was a salary "freeze" in Federal pay tables, but employees could still earn more within the Federal tables.

Note: Authorized percentages represent the maximum allowable—some contractors spent less than authorized due to affordability.

Moreover, for some contractors, take-home pay has declined for many years in a row because of negative growth rates in non-salary categories. LANL, in particular, has seen declines in average compensation every year since 2009, according to a CAPE study. As an example, in fiscal year 2012, LANL employees received about a 2-percent salary increases on average, while increasing their contributions from up to 6 percent to up to 8 percent of salary towards their pension plan (applicable to participants in the pension plan).

Contractor benefits have also had negative growth, while Federal benefit costs have been increasing. From 2010 thru 2012, the weighted average active contractor employee benefit costs have decreased 0.9 percent per year (–1.8 percent cumulatively). In comparison, OMB guidance requests that Federal agencies assume a 5-percent growth rate in Federal benefit costs starting in fiscal year 2014 (actual USG-wide benefit growth rates the past few years is not readily available to NNSA staff, but presumably the OMB direction on benefit guidance would be based on actuals).

For fiscal year 2014, NNSA authorized between 2.5- to 3-percent base contractor salary growth for fiscal year 2014, still below the 4-percent figure. This was determined by evaluating each site against the market independently. Hence, base salary growth over the last several years has been held at or below industry market movement rates of about 3 percent.

Although we cannot confirm the source, the referenced 4-percent increase per year figure may have originated from a CAPE study that found that between the 1990s and 2011, annual LANL cost (roughly equal to annual appropriations sent to LANL plus WFO) divided by the workforce at LANL grew at about 4 percent per year. This rate does not reflect the compensation earned by contractor employees, but rather reflects expenditure growth rates divided by FTEs. The expenditures are also used for a variety of activities, including things directly related to LANL employee compensation such as FTE salary and benefits; and things not related to LANL FTE employees, such as pension payments to retired employees and sub-contract work. Moreover, the average rate over 20 years at LANL is not reflective of growth rates over the last 5 years across all of the M&Os. That said, this percentage is important for NNSA in its management of NNSA's program of work and is something that NNSA does need to be aware of.

Ms. MILLER. I know that one of the major concerns of national laboratory directors is that salaries were frozen, and as you know, pay scales can be complicated. There was some freeze put on. There was deep concern that this was going to affect the laboratories' ability to attract and retain the level of employee that they needed.

Senator FEINSTEIN. Okay. Well, I mean, that's a lot of money. It's $2.6 billion right there. You're saying it's made at the Secretarial level?

Ms. MILLER. Correct.

Senator FEINSTEIN. We'll find out.

As I mentioned and you mentioned, the President has described nuclear terrorism as the most immediate and extreme threat to global security and that radiological, or nuclear attack, on United States soil would result in dire and profound consequences for the country. It seems to me this budget abandons that. The goal to convert research reactors using highly enriched uranium to low-enriched uranium has slipped 8 years to 2030. Efforts to secure radiological sources in the United States and overseas has slipped 20 years to 2044.

In addition, there's no target date to secure more than 1,000 kilograms of highly enriched uranium and 1,000 kilograms of plutonium. So rather than getting the job done, these materials are going to be vulnerable for a long, long time.

So I would very much like to understand what's going on here. Because to me, it's a total backing away of a major commitment. People say one thing and do another. Could you comment as to whether this is correct in the slippage? If it isn't, please correct it.

Ms. MILLER. I'm going to ask Ms. Harrington to answer that. You're the lucky one.

Ms. HARRINGTON. Well, I do consider myself lucky to have this program under me. And I would say that in our planning, you know, this is a very complicated environment. Radiological sources in the United States, of course, are regulated by the Nuclear Regulatory Commission (NRC). They are not regulated by us. We work in close partnership with both NRC and with the Department of Homeland Security, which clearly has a role to play, as well as others.

Senator FEINSTEIN. Why don't you just tell me, is this slippage that I have just indicated correct?

Ms. HARRINGTON. There is some schedule slippage in our projection.

Senator FEINSTEIN. Is the answer yes?

Ms. HARRINGTON. Yes.

Senator FEINSTEIN. Okay. What are you going to do about it?

Ms. HARRINGTON. Part of the strategy to try to accelerate some of those conversions is to work more intensively with our both international and domestic partners through the G8 Global Partnership, through other international mechanisms. We are able to team with other countries to be able to do this.

Russia, for example, is taking much more responsibility itself for the conversion of its own reactors. And you know this topic well. You are well aware that about 70 of the remaining reactors to be converted are in Russia. So having Russia to step up and take a much more active role in this area is important. They have a commitment to get the first one done by the 2014 Nuclear Security Summit.

Similarly, in the United States, we cannot, as NNSA, we should not be paying for private entities to upgrade their security. We can give them technical advice. We can partner with them. We can work with suppliers of equipment that contain radiological sources to improve the security.

Senator FEINSTEIN. Let me stop you. I understand all that.

Is there a target date to secure more than the 1,000 kilograms of highly enriched uranium and the same of plutonium? Is there a target date to get that done by?

Ms. HARRINGTON. We are working on new target dates for those things. We can get back to you with more information on that, yes.

Senator FEINSTEIN. I'm serious. Before the budget goes, please.

Ms. HARRINGTON. We will.

[The information follows:]

The Global Threat Reduction Initiative (GTRI) remains on track to achieve the goals laid out in the 4-year plan as well as to remove or confirm the disposition of at least another 1,000 kilograms of material beyond the 4-year plan by 2019.

Senator FEINSTEIN. Okay.

Senator Alexander.

Senator ALEXANDER. Thanks, Madam Chairman. Welcome.

On page 51 of President Obama's budget, it says the following about the Tennessee Valley Authority (TVA): After a long paragraph, it says, "The administration intends to undertake a strategic review of options for addressing TVA's financial situation, including the possible divestiture of TVA in part or as a whole."

Is the Obama administration really going to sell TVA?

Ms. MILLER. Senator, as you know, TVA does not come under the Department of Energy. So I'm not privy to all the discussions of the administration on——

Senator ALEXANDER. Well, if it's not under the Department of Energy, what Department would it be under? It wouldn't be under education or——

Ms. MILLER. No. I believe it's Interior. We don't control the TVA. It is not in our budget.

Senator ALEXANDER. But wouldn't you think that if the President were going to propose selling the Nation's largest public utility and supplier of electricity, that they would ask advice? Were you consulted about the sale of TVA?

Ms. MILLER. He may well have consulted with the Secretary of Energy. I was not consulted. But I don't work on the energy side. So if it was with respect to a utility, that's true. If it's with respect to the national security aspect of it, certainly defense needs would have to be taken into consideration before any movement could be done.

Senator ALEXANDER. Well, is tritium not important in the development of nuclear weapons?

Ms. MILLER. Very important.

Senator ALEXANDER. Do you know where the tritium supply comes from?

Ms. MILLER. TVA.

Senator ALEXANDER. What?

Ms. MILLER. We irradiate our fuel rods at TVA.

Senator ALEXANDER. Right. So TVA provides the tritium that we use to make our nuclear weapons. Is there any other source of tritium that we have?

Ms. MILLER. No.

Dr. COOK. There is not, sir.

Senator ALEXANDER. There's not. And how difficult would it be to find a second source?

Dr. COOK. We have not had a need to look into that.

Senator ALEXANDER. But you would if you sold TVA. Do you think an investor-owned utility might be quick to change its reactors and start producing tritium?

Dr. COOK. I think it's a reasonable question. I won't speculate. But we do have a continuing need for tritium, and it's important to the stockpile.

Senator ALEXANDER. Well, my suggestion would be that you might suggest to the President's advisors that if he's going to sell the Agency that produces tritium for—all of the tritium—for our nuclear weapons system, he might get some advice from the Department of Energy before he does that.

I have some other questions about the sale of TVA. What would you do about the debt? What would you do about—what price would it bring? But my question, fundamentally, is that the ration-

ale for TVA is that it is a Federal entity. It's basically owned by the taxpayers of the country. And as a result of that, it's in a position to take on missions that a private investor-owned utility might not, such as the production of tritium, such as building one of the first small nuclear reactors, a project in which the Department of Energy is very interested.

So I would think that the Department of Energy would want to give advice to the administration about thinking through any proposal to sell our only producer of tritium and an agency that could undertake national missions such as small reactors that investor-owned utilities might not.

Let me move to a different area. With the deferral of the plutonium facility at Los Alamos, what's our strategy for plutonium production for the foreseeable future? Can we meet our needs, and how will we do it?

Dr. COOK. I'll begin from sort of the middle. Yes, we can meet our needs. We're in peril with the deferral of the Chemistry and Metallurgy Research Replacement (CMRR). We've done a fairly comprehensive study. We've enjoined the Department of Defense in that study.

The strategy is to use the capabilities that we have, consider other capabilities in addition. But one element, for example, is the radiation lab, utility, and office building that was constructed as a part of the CMRR project is fully in place. We're fairly close to completing the equipment installation in radiological laboratory utility and office building (RULAB). We've granted it an ability to operate with higher levels of plutonium for analytic chemistry, and that's a key part.

Another part of the strategy is to look through, comprehensively, the missions that we undertake in the plutonium facility number 4——

Senator ALEXANDER. Are we talking about reusing pits? Is that what we're talking about?

Dr. COOK. It's all tied together. Yes. Our strategy is a combination both of pit reuse and remanufacturing pits of existing and well-known and previously tested designs. So it's that combination, again, that we've worked through and have concluded that we can meet the stockpile needs for the life extension programs that we have, with a level of 30 pits per annum newly manufactured, and up to 90 pits per annum pit reuse.

Senator ALEXANDER. So you could do that that much?

Dr. COOK. We can do that much, right.

Senator ALEXANDER. Okay.

Dr. COOK. The question is what we would have to do if we have a need to go beyond 30 pits per annum, if for example, we couldn't progress with the strategy that has been agreed now at the Nuclear Weapon Council and U.S. Strategic Command, NNSA, and the DOD, and the services to have a series of life extension programs moving through for the next 30 years or so. If one got stopped, it would pile onto another. In that case, we'd have a need that's higher.

Senator ALEXANDER. Well, my time is up. But let me ask this last question. Is your customer, the Department of Defense, satisfied that you can meet its needs?

Dr. COOK. The answer is that our interagency partner, the Department of Defense, is satisfied it can meet its needs. The DOD is a customer and a partner, but this is the Nation's nuclear deterrent.

Senator ALEXANDER. Thank you, Dr. Cook. Thank you, Madam Chairman.

Senator FEINSTEIN. Thank you very much.

Senator Graham, and then Senator Udall.

Senator GRAHAM. We'll make this as painless as possible. Okay.

Senator FEINSTEIN. That's a warning.

Ms. MILLER. Got it.

Senator GRAHAM. All right. So here's the deal. We've got 34 metric tons of weapons-grade plutonium destined for the Savannah River site that will be converted from weapons-grade material to commercial-grade nuclear fuel. We're talking swords to plowshares. That's pretty good, right? Seventeen hundred warheads will be disposed of forever between the U.S. and Russia, 8,500 each.

Do you agree with that, Ms. Miller?

Ms. MILLER. I do. I do agree.

Senator GRAHAM. And we have an agreement with the Russians, where they will dispose of 34 metric tons. Right?

Ms. MILLER. That's correct.

Senator GRAHAM. So this is a good thing. It's been going on since the 1990s.

Now, we've been studying since the 1990s how to dispose of the plutonium. And direct disposition would be a violation of the agreement; do you agree with that?

Ms. MILLER. It would be a violation of the agreement, correct.

Senator GRAHAM. Yes, because you could reconstitute it. We want to make sure that no one can ever use this stuff for weapons material again.

So we chose mixed oxide (MO_X) disposition; is that correct?

Ms. MILLER. Yes.

Senator GRAHAM. And we have an agreement, which the Russians signed in 2010, where we say we will put the 34 tons through the MO_X system to turn it into commercial-grade fuel; is that correct?

Ms. MILLER. Yes, partly.

Senator GRAHAM. Okay. And part of that MO_X plan was to build three facilities at Savannah River site, one for Pit Disassembly and Conversion Facility (PDCF), one for waste, and the other to MO_X; is that correct?

Ms. MILLER. That was the plan.

Senator GRAHAM. Okay. And because we're such good stewards of the taxpayer dollars, and we're so creative, and y'all did a good job here, we found a way to save $2 billion by not building the PDCF facility; is that correct?

Ms. MILLER. We hope that it won't be that much, yeah.

Senator GRAHAM. Yeah. So we think it will be $2 billion. We don't have to build a third facility.

Now, an environmental impact study was done when we were talking about the PDCF facility, and if you went down the vitrification route, turning all this into glass, that study said you'd have

to bring in high-level waste from somewhere else to make this work. Do you remember that?

Ms. MILLER. I do not. There is high-level waste in Savannah River already that's being vitrified, as I know you're all aware.

Senator GRAHAM. Yes. But the study says you'd have to bring some in for Hanford to make this work. And the study also said that the current vitrification facility could not process 34 metric tons of plutonium. You'd have to build a new facility, and it would be in violation with the agreement with the Russians.

So my State, Madam Chairman, years ago accepted 34 metric tons of plutonium with the promise we would dispose of it in a way to make the world safer, create jobs in South Carolina and Georgia, and at the end of the day not be stuck with this stuff.

So we're halfway through building the MO_X facility. And I want to compliment the Obama administration. You're the first people to ever actually build anything. We've been talking about it forever. Now we've got about a $2 billion cost overrun; is that correct?

Ms. MILLER. Oh, no. It's much larger than $2 billion. It's huge.

Senator GRAHAM. Are you sure?

Ms. MILLER. Well, the estimate a year ago was that the full cost of construction would be about $4 billion. We are now entertaining a baseline change proposal from the contractor for nearly $8 billion.

Senator FEINSTEIN. Oh, my goodness.

Senator GRAHAM. Is that right? The last numbers we were given were around 6. Let's say it's 8. We're saying 6.

Senator FEINSTEIN. I'd like to see it.

Senator GRAHAM. Yes, yes. Let's just live on the edge here.

Ms. MILLER. I think the contractor is hoping they can save money. They're now talking about what they might do. But there's no proposal to us for——

Senator GRAHAM. Right. Well, we can pretty well assure you we can get this thing down to 6, 6.2, I think. And I want to save money. But one thing I will not accept is breaking the agreement with the Russians and coming up with an alternative that is going to cost more and take longer.

Can you think of any other way to do this that would keep this program on schedule, other than MO_X?

Ms. MILLER. I cannot. But I am not a technical person. So I couldn't, would not even begin to put down on paper.

Senator GRAHAM. Yes, ma'am. And that's an honest answer.

I can tell you they've studied this since 1995. You can't do direct disposition. Vitrification is the only other alternative. You'd have to build a new facility. It would cost a lot more than $4 billion. So I think the goal here is to reduce the cost by talking to the contractor. And I just talked to Dennis McDonough, and I am willing to do that. I think your concerns about cost overruns are correct.

But in the budget, you have stamped out your construction. And that is an absolute nonstarter for me and the program. We've got to get this stuff off the market. And we can't keep playing games with the people of South Carolina and Georgia.

So, Madam Chairman, what I will do is work with the NNSA of reducing costs to the program that we've committed to, that we've signed up with the Russians to get this stuff done. And there is a possibility, I know my time is up, that the British have plutonium,

weapons-grade plutonium. They don't know what to do with it. If we could ever get MO_X up and running, and we can, we've got to have a customer for the disposition. Maybe we could do something with the British where we could take their weapons-grade plutonium, get it off the market, it could never be used for bombs again, and they could help pay for this thing.

So I'm definitely thinking outside the box. I've just talked to the White House. I've got a hold on Secretary Moniz, the nominee. He's a fine man, would be a great Secretary. But this is an unacceptable alternative, to stop this program in the middle when there is no other plan. I am confident there is no other plan. We can lower costs, but we can't find a new way to do this in terms of cost and timeliness.

So thank you for your time. I look forward to keep working with you, Ms. Miller.

Ms. MILLER. Thank you.

Senator FEINSTEIN. Thank you very much, Senator.

Senator Udall.

Senator UDALL. Thank you, Madam Chair.

The budget that has been presented here today is a good start, I think. But far from meeting the goals that Congress and even the President have set out for NNSA, your testimony states that NNSA supports the President's nuclear security strategy, including New Strategic Arms Reduction Treaty (New START) and Nuclear Posture Review (NPR). While some of the aspects of this budget clearly support the positions in the NPR and the New START, such as the B61 life extension program, other aspects do not, such as the lack of a plan from the NNSA to present a clear alternative plutonium strategy after the deferral of the CMRR.

While outside NNSA, I must also note that the current lack of sufficient funding for important cleanup programs at Los Alamos, which are crucial to maintaining strong community support for the lab, NNSA for over a year has failed to present a full plan for how to deal with the deferral of the CMRR. While I am open to a plan that includes a modular option to meet mission requirements, this idea is far from mature. In addition, the interim plan has more questions than answers, such as where important scientific work will be done when the Chemistry and Metallurgy Research (CMR) building is closed in 2019 and before a more permanent solution is completed.

NNSA has expressed confidence that this work can somehow be done at the newly constructed radiological lab, a facility with a lower HAZMAT category than is needed to carry out the required work. I'm concerned about this delay because I believe that our workers and scientists deserve the best possible facilities to carry out their mission safely.

It is because of this strong conviction that I also worked with Senator Kyl during the last Congress to create an advisory panel to make recommendations on how to reform the NNSA. The cost overruns, safety and security incidents, and failed projects at NNSA must come to a stop. Now, according to your testimony, instead of presenting a plan to Congress regarding how to deal with the deferral of the CMRR, NNSA and DOD's cost assessment and

program evaluation (CAPE) directed developing a business case analysis of the plutonium strategy to be completed by August 2013.

My question here is: Where is the NNSA in analyzing the business case for a modular option to the CMRR? What additional studies need to be done before we know if this option will meet mission requirements and when NNSA could feasibly begin construction?

Ms. MILLER. Thank you, Senator Udall.

I would just like to begin by noting that, as Senator Feinstein said, we too, inside the NNSA, have grown very, very concerned and very committed to address the issue of buildings that we start at one price, even in thinking about them, only to find over a period of a few years have doubled, tripled, quadrupled in price.

As a result of that, and driven to begin with by the 2011 Budget Control Act, which set us back in terms of our budget by a couple of years, we did announce last year, as you noted, that we were not going to go forward with the building of the CMRR as it had been conceived up to that point.

Instead, at this stage, we've done two things. One, we've developed a strategy, which I'm going to ask my colleague, Dr. Cook, to speak to, on how to address plutonium needs for the stockpile until we do have a full capability for plutonium handling. But the second thing is we are looking at the modular proposal that the Los Alamos laboratory has discussed with us. But as my colleagues in the Nuclear Weapons Council and I agreed a few weeks ago, we are looking at a range of possibilities. Because what's important here is not to just hitch onto the next thing only to find that, too, is an unsustainable project at an unsustainable cost and unjustifiable.

So what we're committed to at this point is addressing the needs in the best possible way that we can actually afford. So to that end, there is a business case being developed with a joint working group of the DOD, CAPE, and the NNSA, and the laboratory, because you can't do it with only one group. And that business case is looking at options, not just the modular facility, but other things as well.

I'd like to ask Dr. Cook to talk about the interim strategy.

Dr. COOK. Sure. I'll follow up directly, sir.

There are at least four elements, and we're taking actions on all of them. So an immediate element is that the new RLUOB, which is constructed and I believe you've been to, we will complete the equipment installation most likely by the end of June. That's already in the very beginning of initial operations, and that's where we'll undertake analytic chemistry capabilities that really replace part of the existing CMR.

The second part of the strategy is to go through PF4 conceptually, determine what missions used to be deployed there that no longer need to be met. I tasked the laboratory in responding back to me by the end of 60 days, that will be by the end of April, with their analysis of that. And there is some good indication that we will be able to use, reuse some of the space of PF4, but rip some of the old equipment out. So that's element number two.

Element number three—and in parallel, we'll be doing this business case analysis with the Office of the Secretary of Defense (OSD), CAPE, and certainly we're keeping U.S. Strategic Command, the DOD, the Armed Services informed on where we are with the basic plutonium capability that leads to pits.

The third part of the strategy, which is actually getting out of CMR, we're holding to the date of doing that by 2019. And to do that, we need to clean up a number of things. I won't go into detail here. But we have a resourced plan to actually clean those up and move capability, but not the old equipment for the remaining parts, into PF4. Those are three parts of the strategy.

The fourth part, as Administrator Miller has said, is considering the acquisition of additional and new capability in a modular way. That is promising because we can get some of the earlier capabilities at less initial cost or, as with our past strategy and the one that is still on the books, with full CMRR. We don't get the first capability until we get all of the capability. We think we can come up with a more clever path, one that will get us to the case that we need to be with plutonium research, as well as plutonium manufacturing. But that's why we're going through this work fairly intensively.

All of this is shaping the budget request for 2015 through 2019 that will be made. We'll begin that work in the summer. We'll complete that work by the end of the calendar year. Thank you.

Senator FEINSTEIN. Ms. Miller, you've inherited a big problem, I think. Let's talk about it a little bit.

We've talked about it, the ranking member and I. And there are all these starts, and they all seem to crumble. According to the GAO, one of the biggest management weaknesses is a failure to properly assess alternatives before embarking on multimillion-dollar construction.

Now, I hope I'm not confusing it. But it's my understanding, and we had a hearing with General Cartwright awhile ago, that that plutonium facility at Los Alamos is two buildings that you could join together and that you wouldn't have to raise the roof. Is that correct, or am I mixing buildings?

Ms. MILLER. I think the roof being raised is at UPF. There was no issue of roofs being raised at Los Alamos. And I just want to say that the roof being raised at UPF is still in the design phase. We didn't have to rip off an actual roof. Nothing has been constructed there.

Senator FEINSTEIN. So that won't be necessary. Is that what you're saying?

Ms. MILLER. Well——

Senator FEINSTEIN. Or you will have to rip off the roof?

Ms. MILLER. No, no, no. No. There's no facility right now in Tennessee where it's still in the design phase. But in the design phase——

Senator FEINSTEIN. Okay. So what I was talking about was the pit production facility that you, Dr. Cook, are saying is not necessary.

Dr. COOK. While I'm not sure what specific issue you're asking, I can get part of the way there. And then you may be able to follow up.

The pit-making facility is in PF4. I just addressed the modular acquisition of new capability. And an issue of PF4 has to do with the seismic stability and what we have to do to improve the building to keep it there for a long time.

There are a couple of elements in our strategy. And again, we're not only developing them, they are funded for the work to do the analysis and early parts. We've already substantially strengthened PF4. And the question remains, What if there is an extraordinary earthquake beyond the design basis once every 7,500 years? To withstand an earthquake like that, we have to do additional work. And some part of that work is in the roof of PF4. But it doesn't require replacement.

Part of the long-term strategy now with acquisition of modular capability is we see our way through, taking some of the elements that are in PF4 associated with pit making and the making of power supplies, and putting those things that present the greatest hazard due to material at risk, for example, molten plutonium, taking those out of PF4, putting those in some modular facilities that are small, special purpose and less expensive than trying to change a whole facility. So we're considering that in a comprehensive strategy. That may be part of what you're hearing.

Senator FEINSTEIN. Ms. Miller, this is all in your tent now. Do you have a methodology to sort out these problems, facility by facility, and to hold people accountable to time deadlines and to estimates?

Ms. MILLER. Thank you, Senator, and thank you for the opportunity to talk about accountability.

I think the message has begun to spread in the NNSA world, which of course includes Federal people as well as the contractor community, the laboratories is that accountability is going to be applied to absolutely everybody.

But in order to hold people accountable, you have to have the place managed in a way that you have actual visibility into what people are doing. You have to have a system in place that you can be clear and consistent about what the expectations are. And then you have to have the right people in the right places to drive that accountability. Again, this is important for us on the Federal side, this is important for us on our contractors side, and in between.

I mentioned it briefly in my opening statement, but coming up on a year ago, we announced that we were no longer going to operate the field as independent sites with each place running its own version of what the policies were out of headquarters. So we have stood up an organization in the NNSA for the first time, there is no parallel in DOE, which makes the field offices and the sites part of our line, which means they're directly accountable. Through the head of the Office of Infrastructure and Operations, they're directly accountable to me.

So I think between that and discussions that I have had repeatedly and broadly throughout our contractor community on what the expectations are, we can begin to make it clear to people what we mean by accountability.

Senator FEINSTEIN. Okay. And while you were talking, and the staff just handed me some material.

Ms. MILLER. Yeah, I know. I'm sorry.

Senator FEINSTEIN. And said, "Ask this."

Ms. MILLER. Okay. Go ahead. Ask that.

Senator FEINSTEIN. So I will. And it's my staff's understanding that this year NNSA granted award term extensions to the contrac-

tors that run both Los Alamos and Livermore, even though the contractors did not meet performance requirements.

The decision to extend contracts, which are worth billions, is one of the main mechanisms to hold them accountable. A failure to meet performance thresholds means the contract is not extended, and the contractor must compete once the contract ends. In the case of Los Alamos and Livermore, neither met performance thresholds because of a combination of management and safety issues and missed scientific milestones. But their contracts were extended.

To make matters worse, the contracts were extended to 2018 and 2019, based on an unusual contract mechanism that extends contracts 7 years in the future. Regardless of performance and barring a major catastrophe, Los Alamos and Livermore contractors would manage the labs until at least 2018 and 2019. This decision was strongly criticized by the GAO.

So there's one in Senator Udall's State, one in my State. And I think we're both very proud of them. But I mean, this is just unbelievable. Why would contracts be extended if people are not performing adequately?

Ms. MILLER. Senator Feinstein, the annual fee award process is something that I, in my capacity as the principal deputy, have had the final word on as the fee determining official for the NNSA. And I'm happy to talk about both of those decisions.

First of all, a serious amount of fee was taken on both places.

There are two things that go on with the fee determination. One is the amount of fee that is earned in a given year. And this is very carefully laid out. We are in the process of renovating, I would call it, the way that we are doing this in concert with the laboratories as partners and how we will judge that. But there is fee annually that is under consideration.

And in both the case of Los Alamos and Livermore, for the reasons you alluded to, fee was decreased of what they could have been awarded in serious amounts in recognition of their failed milestones and failed performance. In the case of Los Alamos, that was the NMSSUP project that was referred to earlier. In the case of Livermore, it was the National Ignition Facility (NIF) and some other things.

However, with regard to the award term, in both of those laboratories we had relatively new, and in one case very new, laboratory directors. This was their first real year being at the place. So my options were to either show support for what I personally know they are trying to get done to improve performance at those laboratories, or to take this very strong step of not awarding the award term, which, in my view, would serve possibly to undermine them not only with their boards, but with their employees.

In my judgment, for the health of the enterprise, I went ahead and awarded the award term, but got them on fee. They all know they're on strong notice now that they got a one-time pass, if you will, for that. But, you know, I think everybody in these situations has to decide.

Senator FEINSTEIN. Well, let me ask you. Are they competent to do the job?

Ms. MILLER. The laboratory directors?

Senator FEINSTEIN. The contractors.

Ms. MILLER. Well, the laboratory director is the head of that contract. I believe, and again, in both cases, those were very specific statements of support for those new laboratory directors, who marked a—I think in both cases it's safe to say—the appointment of those laboratory directors was a serious statement by the boards of the contractors, that combined LLC board, on where they understood they needed to take management of the laboratory.

Senator FEINSTEIN. Stop for a second. Does the lab director, the overall lab director, run the contract?

Ms. MILLER. Yes. He is the chief official. Yes. He is the head of it.

Senator FEINSTEIN. Does that make sense that you have the director of the lab, who I'd assume has a scientific background, running these contracts?

Ms. MILLER. It may be a fair question to ask. And again, this of course dates from the time when the change was made to a for-profit model. As you know, in both cases, the lead partner on those contracts at both Los Alamos and Livermore continues to be the University of California, which has this historic connection to both laboratories. The laboratory director is an employee of the University of California in both cases.

The number-two people at both facilities are employees of the partner, which in this case, in both cases, is Bechtel. So that's how they set it up in the LLC.

Senator FEINSTEIN. Well, this is a horse of another color.

Ms. MILLER. That's right.

Senator FEINSTEIN. Now, when you want to get down and talk about that and whether this is really working out to be an economically sound arrangement——

Ms. MILLER. That's a very good conversation.

Senator FEINSTEIN. I remember going back at Los Alamos, where some 2,000 employees were fired and the costs of the Bechtel contract are substantial. I am very much aware, in the interest of full disclosure, my husband is a regent of the University of California. I don't discuss this with him. That's the best way of handling it.

Ms. MILLER. I'm sure.

Senator FEINSTEIN. But I am really concerned. Because these labs used to be pristine. Now we come across all these problems, just problem after problem after problem. And seemingly, there's no resolution.

Now, I just don't know enough to know whether a lab director can do the spreadsheets and do all the rest to direct a contracting team.

Ms. MILLER. This is a conversation I would very much welcome having with you, including about the model overall. Frankly, we have concerns about the financial aspect, as well.

I would say that, you know, to be fair, the laboratory director himself is not spending the time actually composing the spreadsheets, obviously. That's done by other people. But he is expected to run the business, along with the number-two person who's really the chief operating officer, to that extent, and is running the business operations.

But I think without question, we hold—and we are expected to under the terms of the contract—we hold the laboratory director responsible for what goes on at the laboratory.

Senator FEINSTEIN. I just don't know what to say. How long have we been at this now, 2 years? Would that be fair to say it, looking at these overruns everywhere? Nothing seems to change. We have people in, and Senator Alexander and I, we have meetings. We try to understand and hold them accountable.

Ms. MILLER. So with respect to overruns, if I can talk about that for a moment. And I think this is not necessarily a function of the laboratory or not the laboratory. I think this is really a function of how we have conducted project management and how we have used that contract traditionally, traditionally in the NNSA.

I say "traditionally" and I stress that because we did make a change about 18 months ago. And first of all, we agreed to remove the management of construction, as we call it at DOE, post-critical decision two, when construction actually starts. We moved this out of defense programs, driven by the fact that root cause analysis—after root cause analysis had told us that the people driving the need for the facility, whatever facility it was, continued to work on design even after we began construction or continued to tinker enough with this that we got killed by the change orders, to be frank.

Senator FEINSTEIN. Wow.

Ms. MILLER. So we took this out of defense programs. We stood up an independent acquisition and project management organization. Again, I mentioned it in my opening statement. We hired Bob Raines, who had spent time in the Department already, but had a long career at Naval Facilities managing projects—construction projects—through the construction management and acquisition policy.

And this was something we've never done before. We've never managed the contractor for their behavior, other than grossly through the management and operating (M&O) contract. So in the case of the NMSSUP project in Los Alamos, in fact, in that case we had budgeted $245 million to do the job. When the design bids came in, they came in at $213 million. So everybody thought, "That's great. We'll save all this money." And lo and behold, of course, there were serious flaws in the design.

So it was revealed that, in fact, to actually get this thing to be what it needed to be, it was going to be $254 million. And again, we budgeted $245, $255. Bob Raines went to the contractor—to Bechtel—and said, "I'm sorry. It's not acceptable that we're going to pay the cost overrun for your mistakes."

The contractor, and I'm sure you know this, Bechtel put $10 million ultimately of their own money back on the table to cover that overrun. So that project is coming in, in fact, at what we budgeted for. Not what we had hoped it would be, which was much less than what we budgeted for, but at what we budgeted for. And Bechtel is paying the extra $10 million.

Again, I'm pretty sure we haven't done this; I know DOE many years, I personally don't know of this. But this is what I mean by accountability and changing the way we manage the business.

Senator FEINSTEIN. Well, let me thank you. I'm very impressed. Thank you for being so up front. We don't want to sit here and criticize. But when it's project after project and it's right in your face and the dollars are so big, you can't ignore it. For us, this mandatory part of our portfolio pushes everything else out—the Department of Energy, the Army Corps of Engineers—so these dollars are really critical dollars.

Ms. MILLER. Yes. I understand.

Senator FEINSTEIN. So I thank you for being up front. And I'd like to suggest that if Senator Udall is interested, that we sit down outside of this and go through each one with the changes that you are making so that we can be assured that the right thing is going to happen in the future.

Ms. MILLER. I would welcome that opportunity, Senator. Thank you.

Senator FEINSTEIN. Thank you.

Senator ALEXANDER. Thanks. Thanks, Madam Chairman. I'm going to have to leave in a moment to go to the floor with a bill that I'm helping to manage, if that's all right with the chairman.

But I do have one comment. It is possible for the Department of Energy to build a building on time, on budget and for a contractor who hires a lab director to be in charge of that. I know Thom Mason is the head of the Oak Ridge National Laboratory. He got that job after he supervised the building of the Spallation Neutron Source, which is a $1.4 billion project managed by the Office of Science. But it came in on time and slightly under budget. So that contractor arrangement has worked out well there.

I wanted to give Admiral Richardson a chance to explain, as he did to me in his office visit, why the nuclear navy needs an increase this year.

Admiral RICHARDSON. Senator, thank you very much for the question, and thank you for the opportunity to appear here before the subcommittee.

Sir, as you know and we discussed during our visit, we exist—Naval Reactors exist solely in support of the fleet. And so our three primary growth projects that are included in this budget are consistent with that philosophy of fleet support. Two of those three projects directly support the replacement for the *Ohio*-class SSBN that sustains the undersea leg of our strategic triad out beyond 2027, when those submarines reach the end of their life and begin to come out of service.

So we have one major project where we have begun and hope to continue the design for the reactor plant for that submarine. We have another project where we are refueling a land-based prototype reactor, using that opportunity to validate some of the technology that will allow us to reach a core for the new class of submarine that lasts the entire life of the ship, saving two submarines and billions of dollars in maintenance over the lifetime of that program.

Additionally, this land-based prototype reactor will allow us to continue to train fleet operators for the next 20 years, sending nuclear-trained sailors to the submarines and carriers in the fleet.

Our third project is also directly tied to fleet support, a project to recapitalize our spent fuel-handling facility in our facility in Idaho. This current facility is over 50 years old. Time has marched

on. The regulatory landscape has marched on. We did analysis of a number of alternatives and determined that the most responsible way to recapitalize that facility in Idaho was to build a new spent fuel handling facility.

This facility is really meeting the need to refuel and defuel our carrier fleet. The *Nimitz*-class carriers are starting—are in the middle of their midlife refueling process. Those spent cores get transported to Idaho for processing and dry storage, as well as the USS *Enterprise* is being defueled as part of her inactivation and decommissioning. And the confluence of those heel-to-toe projects required that we move to a facility that is designed to process those cores and move them to dry storage in Idaho.

So those are the three projects that constitute the growth in our budget this year. And we're thankful for your support.

Senator ALEXANDER. Thank you, Madam Chairman.

Senator FEINSTEIN. Thank you, Senator.

Senator Udall.

Senator UDALL. Great. Thank you, Madam Chair.

And, Madam Chair, I certainly am very interested, as you alluded to, talking through the changes and happy to participate in that. And I think that's an excellent suggestion that you've made, and I'd like to take you up on that.

I want to applaud the NNSA for taking the B61 life extension program (LEP) seriously and requesting adequate funds to carry out this program. The life extension and stockpile stewardship programs ensure that the United States will not need to build new weapons or conduct tests on existing weapons. These programs are important to both Sandia National Laboratory and Los Alamos National Labs.

Maintaining these scientific and engineering capabilities also helps our scientists apply their skills in other areas and underwrite a whole host of scientific and technological achievements.

So my question is: Is the NNSA committed to providing adequate funding for the LEP and the stockpile stewardship programs into the future? And can you address how delaying the B61 LEP could impact the timetable for future LEP's such as the W78 and the W88?

Ms. MILLER. Thank you, Senator. I'll attempt to answer the first part of your question and let Dr. Cook take up the second part.

With respect to money in the NNSA budget to assure that these LEP's are resourced right now, with the proposal that you have from the President for 2014 and the 4 years following it, those systems and those LEP's are properly resourced. The challenge for us, as we all have noted repeatedly, is going to be to meet the budgets as we are assessing them right now, the estimates for what these things will cost. Some of these projects, as you know, are in the very early stages, the 78, 88. We don't know the cost of that yet. We will not know the cost of it for awhile. And the last thing we want to do at this point is start putting numbers on the table when we don't have all the information.

With respect to B61, it's true that everyone will quote the $10 billion number that the DOD CAPE has assessed. And I welcome their assessment, capabilities of the CAPE. I know them many years, and I work very, very closely with them. I think the reason

that there is a $2 billion difference between the assessment that we have composed with Sandia Laboratories and the CAPE, and I discussed this recently with the person leading this team at the CAPE, really comes down to risk. And I think that's the case with all LEP's. These are very complicated systems. We haven't done this kind of work, in some cases, ever. And there is a lot of risk built into that lower number.

However, the challenge—and the CAPE agrees with us about this—our challenge, working together with the laboratory, is going to be to manage that risk and in order to keep the number on the lower end, the lower estimate, and not go to that $10 billion estimate. CAPE doesn't believe it's a foregone conclusion that it will go to $10 billion. That number, again, reflects the risk that's built into this system. So I want to be clear about that. Ask Dr. Cook.

Dr. COOK. It is a good question; I'll try to be succinct in the answer.

The major difficulty with delay, the improvement in maintaining the B61 family is that if we had to delay, we would not be able to meet all elements of the New START treaty. The treaty has been in place now for awhile. The nuclear posture review called out the requirements. B61 was involved in that.

Some of the background in that is we have agreed to consolidate four families of the B61 into a single weapon family that has improved safety, improved security, and will meet its through-life cost in the lowest way for a full life extension program. It has a first production unit of 2019.

And as Administrator Miller just said, you know, we've worked with the interagency. We're mindful of the cost. CAPE did consider what the problem might be if we delay, and of course, the cost goes up.

It's actually a bit more severe than that because then we would have to maintain four families of the current B61 bomb as they get even older. And so we're very driven in a cost-effective way to achieve this LEP.

Now, things we've undertaken to enable that are requiring that we have an integrated master schedule. It's now fully in place. Last year, I think I had an opportunity to comment on that. We have now fully completed risk register. We know the risks; they are assigned to individuals; actions are being taken. We're developing a resource-loaded schedule in industry-standard tools like Oracle and Primavera. So that means we know the amount of money and the time that each task will take, and we're tracking those.

We have the engineering disciplines in place to meet the first production unit (FPU), and this FPU comes now with the beginning of fiscal 2014 only 5 years later: It's 2019. So the majority of funding that is required for the B61 change to get down the number of families as well as to reduce the number of weapons overall, is in the principles. So it is resourced.

Additionally, this will allow us in the course of time to replace the B83, actually a larger system, a system that is not as old as the old B61s, but will be older than the newer 61 family. And that allows us across the deterrent to reduce not only the number of weapons, but the number of weapon types and to improve the safety and security at the same time.

Senator UDALL. Thank you. As I mentioned in my opening, I'm very concerned about how NNSA has been managed in recent years. And I think Congress should be considering structural reforms. The NNSA advisory panel was a bipartisan effort between Senator Kyl and myself, and I'm glad to see that the panel will soon be working to provide recommendations to Congress.

What are the top one or two challenges and limits you are facing at NNSA, and what are the top one or two recommendations you would make to reform the Agency you are currently heading?

Ms. MILLER. With respect to the challenges we're facing, I would say, first of all, the number-one challenge in my view is not unique to the NNSA. It's the uncertainty of the funding climate we live in. And I think all of us who work in this, on your side and on our side, know that it is difficult and a little bit crazy to be deciding a budget 2 and sometimes 3 years in advance and try to prepare actual plans for actual people to execute 3, 2 years in advance of when you're executing. That's number one. So the system, to begin with, is difficult, but we've all learned to at least live with it.

To live in an era where, then, you don't know from one year to the next whether you'll actually have a budget to count on or whether you're living off of a number you didn't plan to causes all sorts of havoc, and that is the number-one challenge. But I don't think the commission is going to be able to solve that one.

I think the other challenges, and this would be something interesting, I think, for that group to look at, is how we can better manage a very large far-flung group of sites that have a history and long-time way of doing business that is not really conducive to the way we run things today and the way we're expected to run.

Our system, after all, was very generously funded for the entire period of the cold war. And of course, the cold war has been over many, many years. But the system that we run, for the most part, was created in that time. The way we operate between the field and the headquarters, the way we operate with our contractors, this has all been pretty much the same way we ran things when money was no object. And as I said, we don't live that way anymore; we fully understand that.

But the biggest challenge we face now is to modernize, as I said to begin with, the way we do things. Because the models that we work off of clearly are not serving us right now. So I think that would be interesting for them to look at.

I know there are many people who have concerns about whether there is too much or not enough oversight by groups inside the Department of Energy or outside of the Department of Energy. And this is certainly an issue that this plays a role in how people react and how costs can be driven one way or the other.

But personally, I don't see that as the biggest challenges we face. I think it's much more within, to begin with. And by having a system and a management approach that actually works, we can probably better manage the oversight and maybe even address better what people's concerns are that drive the oversight in the first place.

Senator UDALL. In your testimony, you stated the NNSA is proposing to eliminate the readiness and technical base and facilities and instead split activities between the existing site stewardship

unit and nuclear programs within defense programs. However, there is a lack of details that I'd like to try and clarify with you.

What is the purpose of moving the readiness in technical base facility (RTBF), and more specifically, can you elaborate regarding what specific workforce restructuring and management efficiency savings are being proposed?

Ms. MILLER. So, with respect to RTBF and why the interest in essentially getting rid of the name, and also moving where the money is managed, stems from something I talked about earlier, which was a management or an organizational change to bring the various sites into alignment and into the line of management for the NNSA. So as I mentioned, we created an Office of Infrastructure and Operations so that we now have a relationship at the sites where we have the owner of the site, the people running the site, and we have the tenants, who are all the people doing the programs at the site.

So that site is responsible for the actual infrastructure and the facilities at the site. They need to be responsible for the money. And when I say "they," what I'm really talking about is the organization infrastructure and operations, not each individual site alone.

So through infrastructure and operations, we'll now fund the actual physical infrastructure of the Agency. And it's nothing more complicated than that.

Up until now, RTBF was all done through defense programs. Pretty much everything was done through defense programs. But I think it's difficult to explain 13 years after the creation of NNSA, and certainly after our missions in so many areas beyond defense programs have grown so much, why we would still run the whole place out of defense programs.

So again, infrastructure and operations has that money in the budget, for the most part, with the exception of the facilities that you described that stay in defense programs because they're specific to defense programs.

Senator UDALL. Thank you for those answers. Thank you, Madam Chair.

Senator FEINSTEIN. Thank you, Senator. We welcome your interest.

ADDITIONAL COMMITTEE QUESTIONS

Well, Ms. Miller, I'm glad I'm not in your shoes, I think it's going to be very hard. But let me just say, and I think I speak for the vice chairman as well, we really do want to work with you. We don't want to be adversaries. You can imagine the amount of frustration when you see things that you think are also important, like nonproliferation, which is getting cut the way it is, to do these things that are filled with cost overruns and real problems.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR FRANK R. LAUTENBERG

Question. In April 2009, President Obama pledged to launch a new international effort to secure all vulnerable nuclear material around the world within 4 years. That deadline passed this month and hundreds of facilities across the globe still hold separated plutonium or highly enriched uranium under varying degrees of de-

fense. The fiscal year 2014 budget request includes a 15-percent cut to the Global Threat Reduction Initiative, which works to reduce vulnerable nuclear and radiological materials worldwide, as well as a 36-percent cut to programs that enhance the security of nuclear weapons stockpiles in countries of concern and reduce illicit trafficking of weapons-usable nuclear material.

While great strides have been made under President Obama to secure vulnerable nuclear materials, what has been the greatest challenge to meeting President Obama's 2009 commitment to secure vulnerable nuclear material around the globe in 4 years? How will NNSA work to ensure that the requested cuts in funding to the Global Threat Initiative in fiscal year 2014 will not set back efforts to secure vulnerable nuclear and radiological materials? What specific benchmarks does the Administration hope to achieve on nuclear material security and nuclear terrorism prevention in its second term?

Answer. The Global Threat Reduction Initiative (GTRI) has indeed made great strides to reduce the prospect of nuclear terrorism in the last 4 years. As of September 1, 2013, GTRI has removed or confirmed the disposal of 5,017 kilograms of vulnerable nuclear material, exceeding the 4-year goal by more than 650 kilograms. Despite this major success, there are some countries—including Belarus, South Africa, and Pakistan—where GTRI was unable to remove all material, primarily due to political reasons. While negotiations on future removals continue, security upgrades are underway at the respective sites in Belarus and South Africa. GTRI continues to work with the interagency and its international partners to eliminate these additional stores of HEU.

The top-line reduction in funding in the fiscal year 2014 request for GTRI is mainly the result of the successful completion of our 4-year acceleration in nuclear material removals. It is consistent with the 4-year plan and reflects funding requested in fiscal year 2013 for removal efforts occurring in early fiscal year 2014.

Four years of accelerated effort helped GTRI make an important contribution to global security, but it is accurately described as "a sprint in the middle of a marathon." Significant stockpiles of HEU still exist in too many places, and global inventories of plutonium are steadily rising. GTRI will continue to work with international partners to eliminate additional stocks of HEU and plutonium after the completion of the 4-year effort. GTRI has recently completed a 5-year effort to reconcile the amounts and location of U.S.-origin HEU outside the United States. As a result of that effort—as well as efforts to identify additional non-U.S.-origin HEU and plutonium that could be eliminated—GTRI has identified up to 3,000 kilograms of additional HEU and plutonium that could be targeted for removal or downblending.

Question. The Second Line of Defense Megaports Initiative provides radiation detection equipment to key international seaports to screen cargo containers for nuclear and other radioactive materials. The program aims to deploy radiation detection equipment at 100 international seaports to screen cargo containers by 2018. However, NNSA has only transferred this equipment to less than half of the identified partner countries, and an October 2012 Government Accountability Office (GAO) report highlighted several concerns with the sustainability of the Megaports Initiative.

How is NNSA addressing the GAO's concerns in developing a long-term plan to ensure that partner countries have the ability to sustain Megaports operations after our equipment is transferred?

Answer. As noted above, the GAO recommend that NNSA: "Finalize its draft sustainability plan for ensuring ongoing sustainability of Megaports operations after NNSA transfers all equipment, maintenance, operations, and related financial responsibilities to partner countries." To meet this recommendation, in October 2012, NNSA's Office of the Second Line of Defense (SLD) finalized its Sustainability Program Plan, which had been in draft form during the GAO review. GAO has been informed of the completion of the requested Plan.

In order to ensure the long-term sustainability of the radiation detection systems it deploys to partner countries, SLD typically provides 3 years of maintenance and sustainability support once an installation is complete. During this 3-year transition phase, information on progress toward transition is gathered through a variety of sources, including joint assurance visits conducted by the partner country and SLD personnel; analysis of daily files from the SLD-provided monitors; reports from the local maintenance providers; and reports from the SLD Help Desk. Each site is assessed quarterly to determine its progress in the three key areas of operations and management, training, and maintenance and logistics. The results of these assessments are formally documented in a SLD database so that progress can be tracked and measured. SLD also tracks the progress of partners beyond the transition phase to ensure that systems continue to operate after the SLD-provided maintenance pe-

riod ends. Given the complex nature of radiation detection systems and the wide-range of partner country capabilities, SLD program planning accounts for such challenges to transitioning systems to partner country responsibility.

PROTECTING CRITICAL INFRASTRUCTURE

Question. The Defense Nuclear Security (DNS) program provides protection for NNSA personnel and facilities and our nuclear weapons from a full spectrum of threats—most notably terrorism. DNS Operations and Maintenance integrates personnel, equipment, and procedures to protect a facility's physical assets and resources against theft, sabotage, diversion, or other criminal acts. New Jersey is home to an area that the FBI has called the most at-risk for a terror attack in part because of a high concentration of critical infrastructure.

How are the security measures DNS is developing for nuclear weapons facilities applicable to protecting other critical infrastructure in New Jersey and around the country?

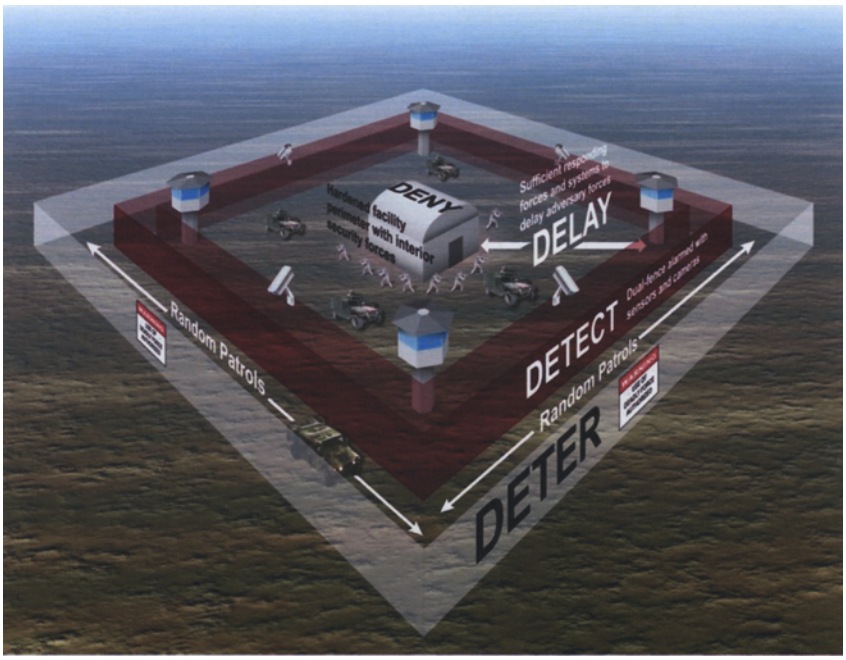


ILLUSTRATION OF LAYERED DEFENSE CONCEPT

Answer. The security measures implemented at the NNSA sites to ensure the security of our Nation's critical nuclear assets are based on a layered defense concept, consistent with standard security principles. The layered defense concept is intended to, first, deter the adversary from attacking. If an adversary does choose to attack, the layered defense concept allows for early detection and assessment of the attacking forces, as well as delaying the adversary to allow security forces to respond in time to deny and defeat the adversary before reaching their objective. These four layers are further described below:

—*Deter Layer*.—Consists of a property protection area marked by signs and randomly patrolled by protective forces. The objective of the Deter Layer is to discourage penetration of the facility perimeter.

—*Detect Layer*.—Consists of gradually more rigorous detection layers with sensors and cameras. The objective of the Detect Layer is to detect and confirm/assess the presence of any unauthorized intruders.

—*Delay Layer*.—Consists of barriers and obstacles (e.g. channeled pathways, hardened buildings and fighting positions, vault doors, razor wire) and tactically trained protective forces with substantial firepower. The objective of the Delay Layer is to slow and help predict the intruders' movement toward protected as-

sets, in order to allow protective forces sufficient time to respond, engage, and defeat adversary forces.

—*Deny/Defeat Layer*.—Consists of a hardened building perimeter and interior protective forces. The objective of the Deny Layer is to defeat any remaining intruders before reaching protected assets.

This concept is based on commonly used security tenets and may be adapted and applied to the security of critical infrastructure anywhere. It is important for security experts and decision makers to evaluate individual potential terrorist targets to determine the most effective way to posture security systems and balance resources between the four layers. Additionally, it is critical to use risk management principles including likelihood and consequence of an attack across a spectrum of targets to understand the complete risk picture for a set of potential targets and inform decisionmakers for resource allocation.

CYBER SECURITY INCIDENT REPORT SYSTEMS

Question. NNSA has said that the agency and our nuclear weapons complex experience up to 10 million "security significant cyber security events" each day. A December 2012 Department of Energy (DOE) audit found that DOE and NNSA have still not developed and deployed an effective cyber security management program. The audit found that both DOE and NNSA run duplicative cyber security incident report systems and reported incidents were not always reported to the proper law enforcement organizations.

How is NNSA working to better coordinate with DOE to create a unified cyber security incident management system to ensure incidents are properly reported to law enforcement in a timely manner?

Answer. NNSA OCIO is working very closely with the DOE CIO to develop and implement a comprehensive incident management system for the Department enterprise. The Joint Cyber Security Coordination Center (JC3) will provide information sharing, reporting and incident response for both the unclassified and classified computing environments. The DOE CIO will provide overall requirements and NNSA CIO will ensure that those requirements are implemented complex-wide.

QUESTIONS SUBMITTED BY SENATOR JOHN HOEVEN

Question. The W–78 is the warhead that goes in our ICBMs. It is aging and needs to be sustained and extended. I am concerned, however, that the budget for work on the W–78 stockpile appears to be shrinking.

—The NNSA's fiscal year 2011 Budget Justification projected that in fiscal year 2014, it would need $347 million for work on the W–78 stockpile.

—This year, NNSA is requesting $54 million for work on the W–78 stockpile.

—I understand that NNSA has budgeted an additional $73 million to begin the W–78 life extension program (LEP).

—Nevertheless, NNSA is requesting less than half of the money for the W–78 than it projected it would need just 3 years ago.

Can you provide an update on the W–78 program and describe why there has been such a decrease in funding and how we intend to ensure those warheads remain viable into the future?

Answer. The decrease in the funding profile reflects an extension of the Life Extension Program (LEP) schedule. The current work on the W78 program encompasses the stockpile system and the life extension activities. The W78 stockpile system has consistently funded maintenance and surveillance activities. However, the LEP scope and schedule have changed significantly from 3 years ago as follows:

—In fiscal year 2011, Congress authorized NNSA to begin the W78 life extension study to address components approaching their end of life and improve system safety and security. NNSA based the projected FYNSP requirements on a 12-month Phase 6.1 start in fiscal year 2011, a Phase 6.2/2A start in fiscal year 2012, a Phase 6.3 start in fiscal year 2014, and a First Production Unit in fiscal year 2021.

—The fiscal year 2011 budget request included approximately $280 million annually for fiscal year 2014–2016 LEP Phase 6.3 work.

—In June 2012 the Nuclear Weapons Council (NWC) authorized NNSA to pursue a W78/88–1 LEP feasibility study and option down select of an interoperable nuclear explosive package (NEP) compatible with the USAF Mk21 reentry vehicle and USN Mk5 reentry body (a.k.a. a common W78/88 warhead).

—This current LEP schedule shows a Phase 6.2/2A start in July 2012, a Phase 6.3 start in July fiscal year 2015, and a First Production Unit in fiscal year

2025. Therefore, the decrease in the fiscal year 2014 funding request is due to the delay of the Phase 6.3 start.

—With the FPU in fiscal year 2025, the W78/88–1 LEP is scheduled to complete production in the early to mid-2030s, consistent with the DOD requirement to begin modernization of the Minuteman III in 2030. The assessment by the laboratories on the aging of the W78 indicates the risk of the extended schedule is acceptable.

Question. The fiscal year 2014 budget decreases the Inertial Confinement Fusion Ignition Program funding by $70.6 million from initial 2012 projections. According to the report, these reductions will reduce operations at the National Ignition Facility, presumably due to failed efforts to achieve ignition. The budget report states "initial ignition efforts have shown physics unknowns and complexities that require a shift in emphasis from ignition experiments".

Can you explain in layman's terms what difficulties you are encountering with this process?

Answer. Codes, models, and assumptions used to predict the required power profile and aiming of the laser system have proven to be insufficiently accurate to determine how to achieve ignition on NIF, whether or not ignition can be achieved, or to provide insight into why ignition has not yet been achieved. Experimental results show that the shape of capsule implosions departs significantly from the spherical shape required for efficient implosions. Additionally there are unknown sources of mix from colder fuel regions into the hot spot.

Question. Does this mean the NNSA is moving away from attempts to create fusion ignition?

Answer. NIF was built for stockpile stewardship, and there is a backlog of experiments directly in support of the stockpile stewardship program that must be given priority. NNSA remains committed to pursuing ignition within a balanced program of experiments on NIF in support of stockpile stewardship and other assigned national missions. In particular, the experience from the National Ignition Campaign demonstrated gaps in codes, models, and understanding; and the emphasis of the ignition effort has shifted towards a science-based approach with more time devoted to collecting data to resolve the experimental inability to achieve ignition as was predicted by the codes.

Question. What impact will this failure to achieve ignition have on our ability to test our stockpile in the future and insure reliability?

Answer. Present confidence in our stockpile is based on the fact that our weapons systems were tested underground prior to the 1992 test moratorium. That basis for our confidence has not changed. The underlying question is whether that confidence will be affected by issues of aging or by changes in configurations or materials as we execute Life Extension Programs (LEPs) to refurbish aging systems and to upgrade safety, security, or manufacturability. The extent to which we can make such changes without affecting confidence in the reliability of the stockpile depends on our confidence in codes and models used to make those assessments. A broad range of experimental capabilities go into making those assessments including subcritical experiments, hydrotest experiments, smaller scale science experiments, and of course, experiments on our ICF facilities, including NIF at Livermore, Z at Sandia, and the Omega laser system at the University of Rochester. The ability to correctly model ignition processes, whether or not we are ultimately successful in achieving ignition, is an important part of that evaluation.

Question. The budget request states the NNSA will be charging external agencies to use the ignition facility. "The IFC Campaign will begin directly charging external users for the use of the facility."

How much funding do you expect to generate from this facility?

Answer. A survey of potential external users of NIF has determined that none have planned or budgeted for the facility costs of their experiments, expecting NIF to be made available on the same cost basis as other DOE user facilities. NNSA is exploring how to make best use of the available funding to support our highest stockpile stewardship objectives and checking the legal basis for not charging external users full-cost reimbursement called for under the Work-for-Others (WFO) Act.

Question. What does the NNSA plan to do with the funding generated?

Answer. The funds collected from external users would only have been used to compensate NIF for the costs of operations in support of those specific users. The issue is moot, however, as NNSA has rescinded the policy and will not seek to collect funds from external users except, hypothetically, in those cases where DOE user facility policies require it (i.e. the data would be proprietary to a commercial user).

SUBCOMMITTEE RECESS

Senator FEINSTEIN. So in any event, I thank you. Gentlemen, thank you. Thank you very much. And we'll talk again.

Ms. MILLER. Thank you, Senator.

Senator FEINSTEIN. Thank you. The hearing is adjourned.

[Whereupon, at 4:08 p.m., Wednesday, April 24, the hearing was recessed to reconvene subject to the call of the Chair.]